

838  
437  
No. 2311

United States  
Circuit Court of Appeals

For the Ninth Circuit.

Transcript of Record.  
(IN THREE VOLUMES)

ALASKA TREADWELL GOLD MINING COM-  
PANY, a Corporation, ALASKA UNITED  
GOLD MINING COMPANY, a Corporation,  
ALASKA MEXICAN GOLD MINING  
COMPANY, a Corporation, and ROBERT A.  
KINZIE,

Appellants,

vs.

ALASKA GASTINEAU MINING COMPANY, a  
Corporation,

Appellee.

VOLUME III.  
(Pages 801 to 1212, Inclusive.)

Upon Appeal from the United States District Court for  
the District of Alaska, Division No. 1.

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ALASKA TREADWELL GOLD MINING COMPANY, a Corporation, ALASKA UNITED GOLD MINING COMPANY, a Corporation, ALASKA MEXICAN GOLD MINING COMPANY, a Corporation, and ROBERT A. KINZIE,

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VOLUME III.

(Pages 801 to 1212, Inclusive.)

Upon Appeal from the United States District Court for the District of Alaska, Division No. 1.



Interrogatory No. 20:

Can a synchronous motor be so adjusted and used so as to operate at unity power factor? [728]

Interrogatory No. 21:

Are synchronous motors in general use?

Interrogatory No. 22:

Can 300 electric horse-power be developed by means of a synchronous motor from a three phase current of about 56 amperes with a voltage of 2300 impressed?

Interrogatory No. 23:

At the generating plant will such a current furnish 300 horse-power for lighting purposes?

Interrogatory No. 24:

Can a motor requiring a current of 300 horse-power to operate be started with a current of 300 horse-power?

Interrogatory No. 25:

If you answer the preceding interrogatory by stating that such a motor cannot be started with the same amount of power that it requires to operate it, how much more power approximately does it require to start a simple squirrel cage motor of the induction type than it does to operate such motor?

Interrogatory No. 26:

What is the difference between the starting current and the running current of the various forms of induction motors?

Interrogatory No. 27:

If a time relay circuit-breaker were installed on the transmission line of a motor, requiring 300 horse-power to operate and such motor were operated by a current flowing over such line and the circuit-

breaker being set to permit the flow of such current and such motor were brought [729] to a state of rest and were afterwards started and placed in operation would the current drawn at the time such motor was started be of greater horse-power than the current drawn when such motor was in continuous operation, the voltage being kept constant?

Interrogatory No. 28:

Would not a time relay circuit-breaker set so as to permit the flow of a current of 300 horse-power permit the taking of a current of greater horse-power for short periods of time?

Interrogatory No. 29:

Is there any other practical device by which the uninterrupted flow of a current could be limited to any given limit at all times except by means of an instantaneous circuit-breaker?

Interrogatory No. 30:

Where a current sought to be furnished or made available is to be a current of not to exceed a given electric horse-power, which, if any form of circuit-breaker is in general use, the instantaneous circuit-breaker or the time relay circuit-breaker?

Interrogatory No. 31:

If you answer the preceding interrogatory by stating that the instantaneous circuit-breaker is the form in general use, you may state whether it is the proper appliance to be used for such purpose. [730]

Interrogatory No. 32:

If you answer the preceding interrogatory by stating that the instantaneous circuit-breaker is the proper appliance under the facts stated in the two preceding interrogatories, you may state why the use

of such instantaneous circuit-breaker is proper.  
[731]

*In the District Court for the District of Alaska,  
Division No. 1, at Juneau.*

No. 968-A.

ALASKA GASTINEAU MINING COMPANY,  
a Corporation,

Plaintiff,

vs.

ALASKA TREADWELL GOLD MINING COM-  
PANY, a Corporation, ALASKA UNITED  
GOLD MINING COMPANY, a Corporation,  
ALASKA MEXICAN GOLD MINING  
COMPANY, a Corporation, and ROBERT A.  
KINZIE,

Defendants.

**Cross-Interrogatories to be Propounded to C. L.  
Cory, W. J. Davis, C. E. Heise, E. A. Quinn, A.  
M. Hunt and H. C. Parker.**

Cross-interrogatory No. 1:

Are you or have you recently been in the employ  
of F. W. Bradley or any of his associates or of O.  
Mills or any of the defendant companies?

Cross-interrogatory No. 2:

Attached to these cross-interrogatories you will find  
a copy of the contract in dispute in this action and  
before answering any of the questions, either direct  
or cross, please read contract and bear the same in  
mind in answering the questions addressed to you.

Cross-interrogatory No. 3:

Is it not a fact that induction motors are used upon

three-phase alternating currents by power consumers much more than synchronous motors? [732]

Cross-interrogatory No. 4:

Where have you seen a synchronous motor in use upon a three-phase alternating current for a load of not to exceed 300 horse-power?

Cross-interrogatory No. 5:

Is not the power factor less than unity wherever induction motors are used upon a three-phase alternating current?

Cross-interrogatory No. 6:

If you answer the last cross-interrogatory in the negative, state the conditions under which you have observed a unity power factor in connection with the use of an induction motor of 300 horse-power or less.

Cross-interrogatory No. 7:

What is the ordinary device or instrument for measuring horse-power upon an electric current where it is the intention of the producer to sell and the consumer to purchase real as distinguished from apparent power?

Cross-interrogatory No. 8:

What is the accepted definition of power factor?

Cross-interrogatory No. 9:

Assuming in this case that it was the intention of the parties to deal in real and not apparent power and that the contract did not require the use of a synchronous motor and that the contract contemplated the use of the power contracted for in mining operations, would you not measure the power by means of a wattmeter and [733] set your circuit-breaker according to the reading of your ammeter and volta-



meter at the instant when your wattmeter showed a consumption of 300 real horse-power?

Cross-interrogatory No. 10:

Assuming that it was the intention of the parties to the contract that the 300 horse-power called for therein was to be used in ordinary mining operations, would it not be reasonable to expect that the power would be applied to induction motors?

Cross-interrogatory No. 11:

If you answer the last question in the negative, state what observation and experience you have had with reference to the use of motors in connection with mining which would justify you in assuming that synchronous motors are commonly used in mining operations upon loads of 300 horse-power or less.

Cross-interrogatory No. 12:

If you answer direct interrogatory No. 16 to the effect that the apparatus mentioned in that interrogatory would permit the uninterrupted flow of a current not to exceed 300 horse-power, assume that the motor upon such current is an induction motor of the ordinary type and not a synchronous motor, can the benefit and use of 300 horse-power be secured under the conditions named in interrogatory [734] No. 16, would not a wattmeter indicate under such a setting that less than 300 horse-power was being taken?

Cross-interrogatory No. 13:

If you answer direct interrogatory No. 19 in the affirmative, that is to the effect that the power factor will vary depending upon the conditions of the load and other matters in connection with the operations carried on, assume for the purposes of this question

that the contract called for the delivery of real and not apparent power, assume that the power factor is 70 instead of unity and that the voltage is 2300 volts, at what amperage would your circuit-breaker be set so as to permit the use of 300 horse-power?

Cross-interrogatory No. 14:

Having answered the last question and assuming that the power factor is 70 when the full load of 300 horse-power is taken and that the power factor has been determined under normal conditions, if these conditions are maintained and not changed, should the circuit-breaker not remain as stated in answer to your last question?

Cross-interrogatory No. 15:

Assuming the conditions named in the last two cross-interrogatories, is it not a fact that the power [735] factor would decrease if a fractional instead of a full load were used in operating the same machinery? Under such fractional load, however, would you have to change the setting of the circuit-breaker so as to prevent the taking of more than the maximum of real power called for?

Cross-interrogatory No. 16:

If you answer direct interrogatory No. 21 in the affirmative, state what you mean by synchronous motors being in general use.

Cross-interrogatory No. 17:

If you answer direct interrogatory No. 21 in the affirmative, state specifically the number of instances of synchronous motors of 300 horse-power or less, within your own knowledge, that are in use and state also the number of induction motors of 300 horse-



power or less that are in general use.

Cross-interrogatory No. 18:

If you answer direct interrogatory No. 24 in the negative, state whether a motor requiring 300 horse-power to operate can be started from a plant with sufficient water power available to generate 300 horse-power.

Cross-interrogatory No. 19:

Assuming horse-power to be worth \$87.00 per annum, what is the value of a thirty second starting surge of 600 horse-power? [736]

Cross-interrogatory No. 20:

Assuming ordinary stoppages at a mining plant and the lightening of loads at change of shift time and a monthly stoppage of three to four hours per month in using a current of 300 horse-power, would not these stoppages ordinarily more than compensate for starting surges of thirty seconds occurring from four to five times during the month?

Cross-interrogatory No. 21:

Where the beneficial use of 300 horse-power is contemplated by the parties to a contract and synchronous motors are not contemplated, but the ordinary type of induction motor is contemplated and in actual use, is it possible to obtain the uninterrupted and beneficial use of 300 horse-power without taking a starting surge of more than 300 horse-power?

Cross-interrogatory No. 22:

If the beneficial and uninterrupted use of 300 horse-power is contemplated by the parties and ordinary types of induction motor are in use as contemplated, can such use be obtained with an instantane-

ous circuit-breaker set at 50 amperes with a voltage of 2300 volts? [737]

Cross-interrogatory No. 23:

You have answered the direct interrogatories propounded by the defendants in this case. Is it not a fact that all of these answers are based upon the assumption of making available 300 apparent horse-power as distinguished from 300 real horse-power?

Cross-interrogatory No. 24:

If you answer the last question in the negative, point out how many and what of your answers, giving the number of the same, contemplate the use of real as distinguished from apparent power, assuming that the party to the contract contemplated the use of induction motors of the ordinary type and not the use of synchronous motors.

Cross-interrogatory No. 25:

Assuming that the direct interrogatories in this action, Nos. 5 to 32, inclusive, call upon you to answer in terms of real instead of apparent power and under ordinary conditions with reference to the use of induction motors, it being assumed that the use of induction motors of the ordinary type was contemplated by the parties, answer each one of the questions in terms of real power, under the assumption that the parties contemplated the use of induction motors [738] of the ordinary type.

SHACKLEFORD & BAYLESS,

Z. R. CHENEY,

Attorneys for Plaintiff. [739]

THIS INDENTURE AND AGREEMENT made and entered into this 14th day of October, 1909, by and between Oxford Mining Company hereinafter called the lessor and The Alaska Treadwell Gold Mining Company, the Alaska Mexican Gold Mining Company and the Alaska United Gold Mining Company hereinafter called the lessees.

N. P. WITNESSETH, First, the lessor has this date and does by these presents lease under the lessees all of the following described real property situated on and near Sheep Creek in the Harris Mining District, District of Alaska, to-wit:

The Mexico Mill-site U. S. Mineral Entry No. 25, lot 71 B. The Belvedere Mill-site U. S. Mineral Entry No. 25, lot 72 B. The Jumbo Mill-site U. S. Mineral Entry No. 60, lot No. 260. Also that certain piece or parcel of land beginning at a stake identical with post No. 2 Jumbo Mill-site U. S. Survey No. 260 on the meander line of Gastineau channel; thence first course along the meander line of Gastineau Channel at ordinary high water

P. J. K. mark N. 52 00' W. 54 feet to stake No. 2;

N. P. thence second course N. 48 15' E. 200 feet to stake No. 3; then S. 52. 00' E. 54 feet to the N. W. side line of Jumbo Mill-site U. S. Survey No. 260, 200 feet to stake No. 1, the place of beginning containing an area of one-quarter of an acre more or less, courses expressed from the true meridian, Mag. Var. 29. 30'; and also that certain water right known as the Sheep Creek Water Right and located on Sheep Creek about three-quarters of a mile from its mouth, together with the flume and

pipe-line connecting the same with the beach near the mill at the south of the said Sheep Creek, also the saw-mill, boarding house, lumber sheds, wharf landing, mill dam, flumes, penstocks, water-wheels, and all other machinery and appliances used in connection with said saw mill, situated near the mouth of said Sheep Creek, together with all machinery, tools, equipment, plants of every kind and description now upon said property for a term of ten (10) years from the date hereof at a monthly rental of One Hundred and Twenty-five (\$125.00) Dollars per month; payable in gold coin of the United States on the first

day of each month during the term of said

P. J. K. lease at the office of the lessees at Tread-

N. P. well, Alaska; and it is hereby agreed, that

if any rent shall be due and unpaid, or if

default shall be made in any of the covenants herein

contained, that it shall be lawful for the

P. J. K. lessor to re-enter said premises and re-

N. P. move all persons therefrom, and the lessees

do hereby covenant, promise and agree to

pay the lessor the said rent in the manner hereinbe-

fore specified, and not to let or underlet the whole

or any part of said premises without a written con-

sent of the lessor, nor to assign this lease or any part

thereof without said written consent, and at the ex-

piration of said term the party of the second part

will quit and surrender said premises in as good state

and condition as the same now are.

P. J. K. It is the intention of the lessees to erect,

N. P. equip and maintain upon said premises a

water power plant of substantial size and

efficiency for the generation of electric power, and if at any time after Two (2) years from the date hereof the lessor or its assigns shall elect to take a current of not to exceed three hundred (300) electric horse-power which shall be taken from and at the generating plant to be installed upon the leased premises hereinbefore described, the lessees undertake, covenant and agree to deliver said current to the lessor or its assigns upon the execution and delivery by the lessor or its assigns to the lessee of a deed or deeds conveying said leased property herein described to the parties of the second part. If prior to the expiration of nine years from the date hereof the lessor does not elect to convey to lessees or their assigns the property herein leased and accept in full consideration therefor the right to the use the three-hundred (300) electric-horse-power hereinbefore mentioned, the lessee may at their option [740] prior to the expiration of the ten (10) years provided in this lease purchase the property herein leased absolutely from the lessor by paying to the lessor the sum of Twenty-Five Thousand Dollars (\$25,000) in gold coin of the United States; and the lessor covenants and agrees upon tender of said sum of Twenty-five Thousand Dollars (\$25,000) to execute and deliver such deeds of conveyance to the property herein leased as hereinbefore specified, excepting only as to the title to (1) the one-quarter acre tract hereinbefore described and (2) the premises occupied and used by the existing wharf of the lessor to both of which the lessor now



asserts only possessory titles. The lessees may at their own cost and expense undertake to perfect the said titles and should lessee wish so to do the lessor shall lend all proper assistance in its power including the using of its name, and should the said titles be so perfected to the said premises or either of

P. J. K.    them, they shall become the property of  
 N. P.      the lessor and remain covered by this lease  
             and subject to all the terms and conditions  
 thereof.

The covenants herein contained shall be construed as running with the land and as a charge thereon, so that any successor or successors in interest

P. J. K.    to the lessor and or lessees who may ac-  
 N. P.      quire any interest in and to the titles to the  
             said land shall be bound by this conveyance  
 in the same manner as if they had executed this agreement; and the lessees hereof may require at their option that the property herein described by conveyed by the lessor to a responsible Trustee for the purpose of carrying out the terms of this agreement, or that deeds and conveyances covering the property herein leased be placed in escrow so as to insure delivery of the same if required under the provisions of any of the covenants of this lease.

P. J. K.    If neither of the options herein provided  
 N. P.      for are accepted by either the lessor or the  
             lessees then the property and rights herein  
 described with all the improvements that are or that may be hereafter placed on the said premises shall be and become the property of the lessor.

The provisions herein as to the delivery of three hundred (300) horse-power at the generating plant

to be installed on the premises herein described contemplates the delivery of an uninterrupted current, but the lessees shall not be liable for damages that may arise from operating and physical causes beyond its control.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands and seals the day and year first above written. Executed in triplicate.

Witness:

HAROLD LAWRENCE.

WALTER W. BLACK.

OXFORD MINING COMPANY,

WALLACE HACKETT,

President,

And HENRY ENDICOTT,

Treasurer.

ALASKA TREADWELL GOLD MINING  
COMPANY,

By H. H. TAYLOR,

President,

F. A. HAMMERSMITH,

Secretary.

ALASKA MEXICAN GOLD MINING  
CO.

By H. H. TAYLOR,

President,

F. A. HAMMERSMITH,

Secretary.

ALASKA UNITED GOLD MINING CO.

By H. H. TAYLOR,

President,

F. A. HAMMERSMITH,

Secretary.

State of California,

City and County of San Francisco,—ss.

On this 12th day of November in the year One Thousand Nine Hundred and Nine, before me, F. J. Kennedy, a Notary Public, in and for said City and County, residing therein, duly commissioned and sworn, personally appeared H. H. Taylor, and F. A. Hammersmith known to me to be the President and Secretary respectively of Alaska Mexican Gold Mining Company and Alaska [741] United Gold Mining Co., the corporations that executed the within and foregoing instrument, and to be the officers who executed the said instrument on behalf of said Corporations therein named, and they acknowledged to me that such corporations executed the same.

In Witness Whereof, I have hereunto set my hand and affixed my official seal, at my office, in the said City and County of San Francisco, the day and year last above written.

[Seal]

P. J. KENNEDY,

Notary Public in and for the City and County of San Francisco, State of California.

State of California,

City and County of San Francisco,—ss.

On this 12th day of November in the year One Thousand Nine Hundred and Nine, before me, P. J. Kennedy, a Notary Public, in and for said City and County, residing therein, duly commissioned and sworn, personally appeared H. H. Taylor and F. A. Hammersmith known to me to be the President and Secretary respectively of Alaska Treadwell Gold



Mining Co., the Corporation that executed the within and foregoing instrument, and to be the officers who executed the said instrument on behalf of said Corporation therein named, and they acknowledged to me that such corporation executed the same.

In Witness Whereof, I have hereunto set my hand and affixed my official seal at my office, in the said City and County of San Francisco, the day and year last above written.

[Seal]

P. J. KENNEDY,

Notary Public in and for the City and County of  
San Francisco, State of California.

Commonwealth of Massachusetts,

County of Suffolk,

City of Boston,—ss.

Be it remembered, that on this 14th day of October, 1909, before me, the undersigned, a Notary Public in and for said County and State, personally appeared Wallace Hackett, President, and Henry Endicott, Treasurer, of the Oxford Mining Company, a Corporation organized under the laws of the State of Maine, to me known to be the individuals described in and who executed the foregoing instrument as such president and Treasurer; and said Henry Endicott having affixed the seal of said Corporation to said instrument, they severally acknowledged to me that he, Wallace Hackett, as President, and he, Henry Endicott, as Treasurer of said Corporation, executed the foregoing instrument for and on behalf of said Corporation as the free and voluntary act of said corporation for the uses and purposes therein set forth. Then the said Henry Endicott, being by

me first duly sworn on his oath states that he is the Treasurer of said Corporation, is acquainted and is the custodian, and has in his possession the corporate seal of said Corporation, and that the seal hereinbefore affixed in the corporate seal of said Corporation, and was affixed by him as such Treasurer by order of the Board of Directors of said Corporation.

In Witness Whereof, I have hereunto set my hand and seal the day and year first above written.

[Seal]

LLOYD A. FROST,  
Notary Public.

My commission expires Dec. 5th, 1913. [742]

*In the District Court for the Territory of Alaska,  
Division No. 1, at Juneau.*

Case No. 968-A.

ALASKA GASTINEAU MINING COMPANY  
(a Corporation),

Plaintiff,

vs.

ALASKA TREADWELL GOLD MINING COMPANY (a Corporation), ALASKA UNITED GOLD MINING COMPANY (a Corporation), ALASKA MEXICAN GOLD MINING COMPANY (a Corporation), and ROBERT A. KINZIE,

Defendants.

**Deposition of C. L. Cory [for Defendants].**

BE IT REMEMBERED that pursuant to the stipulation of counsel for the respective parties in the above-entitled action attached hereto, together with the interrogatories, both direct and cross, also

attached hereto, on the 20th day of February, 1913, in the City and County of San Francisco, State of California, before me, P. J. Kennedy, a Notary Public in and for the City and County of San Francisco, State of California, personally appeared C. L. Cory, a witness produced on behalf of the defendants in the above-entitled action, now pending in said Court, who being by me first duly sworn to testify to the truth, the whole truth, and nothing but the truth in said cause, and to whom I propounded said interrogatories, both direct and cross, testified as follows: [743]

Answer to Direct Interrogatory No. 1:

C. L. Cory. I reside in Berkeley, California.

Answer to Direct Interrogatory No. 2:

My profession is a professor or teacher of Electrical Engineering, and I am also a Consulting Engineer.

Answer to Direct Interrogatory No. 3:

I was educated at Cornell University, Ithaca, New York, doing graduate work there after having graduated from Purdue University at Lafayette, Indiana. I have been a teacher of Electrical Engineering since 1891, having been connected with the University of California at Berkeley continuously since 1892. I have had general experience as a consulting engineer, beginning in April, 1900, since which time in addition to my work at the University of California I have maintained an office in San Francisco, doing general consulting engineering work, principally in the Western States. I have had experience in the design and construction of elec-

(Deposition of C. L. Cory.)

trical power stations, both water power and steam driven, and the transmission and use of electrical power so generated in power operations including the operation of street railway systems, manufacturing plants, mines and electric lighting.

Answer to Direct Interrogatory No. 4:

My present occupation is that of Professor of Electrical Engineering, University of California, and Dean of the College of Mechanics of that institution, where I give instruction in the courses in Electrical Engineering and have general direction of the work done at the University of California in [744] steam, hydraulic, gas and electrical engineering.

In connection with my office in San Francisco I am carrying on a general consulting engineering practice, doing work for various municipalities, corporations and similar organizations.

Answer to Direct Interrogatory No. 5:

Yes.

Answer to Direct Interrogatory No. 6:

A current of electricity of not to exceed 300 electric horse-power is the current usually expressed in amperes by the use of which 300 electric horse-power can be produced.

Answer to Direct Interrogatory No. 7:

The watt.

Answer to Direct Interrogatory No. 8:

A watt is the equivalent of the product of the unit of current practically known as the ampere and the unit of electric pressure or voltage, practically known as the volt.

(Deposition of C. L. Cory.)

Answer to Direct Interrogatory No. 9:

The number of watts in a three-phase system is determined by taking the product of the current in amperes and the electric pressure or voltage in volts, multiplying this product by a constant particularly applicable to the three-phase system, which constant is the  $\sqrt{3}$  or 1.732 times what is known as the power factor, which latter depends entirely upon the conditions of the load.

Answer to Direct Interrogatory No. 10:

746. [745]

Answer to Direct Interrogatory No. 11:

In my opinion no particular power factor is necessarily understood. However, if no mention is made of the power factor, I would assume that a power factor of unity, or 100% would apply. The Standardization Rules of the American Institute of Electrical Engineers, which are generally adopted by the engineering profession, especially Rule 74a, specifically states that "if the apparatus (electrical apparatus) is rated in Kilowatts (a Kilowatt = 1000 watts and 746 watts = 1 H. P.) without specification as to the power factor, a power factor of 100% shall be understood." The same rule, which members of the engineering profession, including myself, followed in our practice, further states that if the electrical apparatus is "rated in Kilowatts and a power factor other than 100% be specified, this should be understood as defining only the nature of the load, and not as applying an increase in the ampere (current) rating of the apparatus which should be based



(Deposition of C. L. Cory.)

upon the Kilowatt rating at 100% power factor."

(Note:—The words in parentheses are mine.)

Answer to Direct Interrogatory No. 12:

If it is sought to make a current of not to exceed 300 H. P. available nothing being stated as to the use to which the power is to be applied, or the type of motors or other electrical apparatus to be installed, etc., I could not do otherwise than assume the power factor of 100% to be understood, because if I did not so assume, it would be impossible to in any way determine the current which it was sought to make available.

Answers to Direct Interrogatories Nos. 13 and 14:

Under the conditions stated in the questions, it is impossible to apply any particular power factor because whether this power factor is 100% or unity, or very nearly zero depends [746] entirely upon the use to which the electric current is applied; in other words, the character of the load and the apparatus used to receive the electric current. Therefore I would assume the power factor would be 100% since no definite statement is made as regards the power factor.

Answer to Direct Interrogatory No. 15:

I would proceed to measure the current with an ammeter, preferably one of the recording type which would record by drawing a curve upon a piece of paper the variations of the current from time to time.

Answer to Direct Interrogatory No. 16:

Yes.

Answer to Direct Interrogatory No. 17:

No.

(Deposition of C. L. Cory.)

Answer to Direct Interrogatory No. 18:

No.

Answer to Direct Interrogatory No. 19:

The power factor of an alternating current motor is not constant but varies with the magnitude of the load and the design and construction of the motor.

Answer to Direct Interrogatory No. 20:

Yes.

Answer to Direct Interrogatory No. 21:

Yes.

Answer to Direct Interrogatory No. 22:

Yes. [747]

Answer to Direct Interrogatory No. 23:

Yes, by the use of incandescent lamps.

Answer to Direct Interrogatory No. 24:

Yes, provided the starting devices of the motor are properly adjusted and operated, and the motor is started without excessive load at the time of starting.

Answer to Direct Interrogatory No. 25:

The amount of electrical current in amperes required to start a simple squirrel cage type of induction motor depends as stated in the answer to Interrogatory No. 24 upon the adjustment of the starting device as well as the design and construction of the motor. The current in amperes may be as much as five times that required to operate the motor at full load. Again, adjustments may be made so that the starting current in amperes may be three times the current in amperes required to operate the motor at full load, and lastly depending entirely upon the

(Deposition of C. L. Cory.)

adjustment and operation of the starting device for the motor and the conditions under which it is started as regards whether under load or not, the starting current may be either less or equal to the current required to operate the motor at full load.

Answer to Direct Interrogatory No. 26:

This has been answered in Question 25, as regards the relative magnitude of the starting current and running current of induction motors.

Answer to Direct Interrogatory No. 27:

Not necessarily, as the current required to start the motor would depend upon the adjustment and operation of the starting devices, and whether the motor is started with its load upon it, or this load thrown upon the motor after it is started. [748]

Answer to Direct Interrogatory No. 28:

Yes.

Answer to Direct Interrogatory No. 29:

There is no such device practical or otherwise except an instantaneous circuit-breaker.

Answer to Direct Interrogatory No. 30:

The instantaneous circuit-breaker is the type in general use where the current is not to exceed a given amount.

Answer to Direct Interrogatory No. 31:

Yes, the instantaneous circuit-breaker is the proper appliance to be used under the conditions set forth in Interrogatory No. 30.

Answer to Direct Interrogatory No. 32:

The instantaneous circuit-breaker is the proper device to use, because it is the only type of circuit-breaker which will automatically open the instant



(Deposition of C. L. Cory.)

that the current exceeds a certain predetermined amount and the only circuit-breaker adjusted to open when the current equals the amount. Also the instantaneous circuit-breaker is the only type of circuit-breaker which will properly protect the generating station and the electrical apparatus therein operated from damage due to excessive currents and what is of more importance the instantaneous circuit-breaker is the only type of circuit-breaker which will protect the electrical service made available from such a central station so that there will be no excessive fluctuation of voltage or electric pressure, due to the excessive current over and above that which it is desired to be allowed to flow for even a short time. [749]

Excessive currents for a short time—meaning thirty seconds or approximately this amount of time—might not necessarily injure the electrical apparatus in the generating station merely because of its excessive quantity for a short time, but such excessive currents even for a short time might seriously interfere with the operation of such apparatus in giving satisfactory service to other customers, and in attempting to recompense for the sudden demand of current the operators might change the adjustment of the electrical controlling devices in the station so as to injure and damage to a considerable extent the electrical apparatus in the generating station used to produce the electric power.

Answer to Cross-interrogatory No. 1:

I am not now in the employ of Mr. F. W. Bradley

(Deposition of C. L. Cory.)

or any of his associates, except that I have been requested by Mr. Bradley to give this deposition. In the past few years, however, I have been from time to time employed as a Consulting Engineer by Mr. Bradley in connection with his various interests on different engineering matters that developed from time to time. I think it was during the month of November, 1910, that Mr. Bradley, for the Alaska Treadwell Gold Mining Company, I believe, requested me to render an opinion regarding the desirability of his company purchasing the water rights on Sheep Creek, which I have since ascertained was in relation to the matter now in dispute. This matter was considered upon the data given me by Mr. Bradley, and the various economic features of the situation gone over in considerable detail. I was therefore first consulted by Mr. Bradley in the matter now under consideration a little more than two years ago. [750]

Answer to Cross-interrogatory No. 2:

I have read the contract.

Answer to Cross-interrogatory No. 3:

Yes, and particularly are induction motors of the smaller sizes used on three-phase alternating current circuits more than synchronous motors.

Answer to Cross-interrogatory No. 4:

I have seen a synchronous motor in use upon a three-phase, alternating current circuit for a load of not to exceed 300 horse-power in the electrical laboratories at the University of California, where a motor of 175 horse-power is used primarily for the

(Deposition of C. L. Cory.)

reason that it operates at all loads with practically constant speed. I have also seen such synchronous motors in operation in the substations of the Pacific Gas & Electric Company where the alternating current is delivered to the synchronous motor and this motor is used to drive dynamos or electric generators for the production of direct current. I have also seen such small sized synochranous motors, less than 300 horse-power, in the substations of other electric light and power companies on the Pacific Coast.

Answer to Cross-interrogatory No. 5:

Not necessarily, as the power factor of an induction motor depends upon the manner in which it is used to drive the load and whether it is the only source of power which is used to operate the devices to be driven by it.

Answer to Cross-interrogatory No. 6:

I have observed a unity or 100% power factor where induction motors of less than 300 horse-power were operated from electrical circuits when upon those same circuits synchronous [751] motors were also operated, the use of these synchronous motors being primarily to control and adjust and usually to increase the power factor of the system. I have also observed a unity power factor in connection with the use of an induction motor of less than 300 horse-power where the dynamo known as an exciter in a power plant is driven jointly by an induction motor and in addition also driven either by a steam engine or small water-wheel.

(Deposition of C. L. Cory.)

Answer to Cross-interrogatory No. 7:

A wattmeter is the ordinary device or instrument used for measuring the power of an electric current, whether this power is measured in horse-power, watts, or kilowatts, which is equal to 1,000 watts.

Answer to Cross-interrogatory No. 8:

The power factor of an alternating current circuit is equal to the real or actual power divided by the apparent power, the power usually being expressed in watts. The apparent watts are equal to the product of the volts and amperes (in the three-phase system this must also be multiplied by the square root of three, or 1.732) but due to the character of apparatus to which the electric current is delivered and the character of use made of the current, the actual or real power in an alternating current circuit may be less than the apparent power.

The power factor is usually expressed in decimal fractions or in percentages. As an illustration, if an electric pressure of 100 volts causes the delivery or production of a current of twenty amperes to the load, or the electrical appliances receiving the electric current, which causes a power factor of 0.8 or 80% on a three-phase circuit, the apparent power is the product of 100 volts and 20 amperes and the square root of 3, or 1.732, which equals 3464 watts; while the actual or real power is  $0.8 \times 100 \times 20 \times 1.732$ , or  $0.8 \times 3464$  watts, [752] or 2771.2 watts.

Answer to Cross-interrogatory No. 9:

Under the assumption stated in the question, and assuming the conditions of the furnishing of the

(Deposition of C. L. Cory.)

power were not in any manner further restricted, I would use a wattmeter to measure the power, but as there are an almost innumerable number of different settings of the circuit-breaker which would correspond to the different quantity of electric current so that the consumption would not exceed 300 real horse-power, the quantity of electric current depending entirely upon the power factor of the load, I would not necessarily set the circuit-breaker to any particular reading of the ammeter to fulfill conditions set forth in the question, assuming the reading of the voltameter or the voltage to be constant and a given amount.

Answer to Cross-interrogatory No. 10:

Not necessarily, although in mining operations in general a number of small induction motors would probably be the type of motors used, the aggregate or total power required for their combined operation at any one time being about 300 horse-power.

Answer to Cross-interrogatory No. 11:

I have answered the above question No. 10 in the affirmative, but I have had experience, especially at the Oneida Mine in Amador County, California, where a synchronous motor was used of a capacity of less than 300 horse-power, the particular reason for the use of the synchronous motor being to improve or increase the power factor of the load so that it would be as nearly unity or 100% as possible. I have known of other mines where synchronous motors of less than 300 horse-power were used, es-



(Deposition of C. L. Cory.)

pecially the Browns Valley Mine in Yuba County, California. [753]

Answer to Cross-interrogatory No. 12:

Under the assumptions given in the question that the motor is an induction motor of the ordinary type, and no other devices were connected to the circuit to improve the power factor, it would not be possible to render available and useful as much as 300 horse-power, but it must be borne in mind that it is quite possible to, even with the use of induction motors, install power factor correcting devices which would make it possible to use the power so as to get the entire 300 horse-power.

Without some such power factor correcting or improving devices, a wattmeter in the circuit would indicate that less than 300 horse-power was being used, but the amount that this power would be less than 300 horse-power would depend entirely upon the character of the load as affecting the power factor.

Answer to Cross-interrogatory No. 13:

Under the circumstances set forth in this question, if the power factor is 0.7 or 70% instead of unity or 100%, the current or amperes corresponding to 300 real or actual horse-power would be 80.3 amperes.

Answer to Cross-interrogatory No. 14:

Under the conditions stated in this question, the circuit-breaker should be set as stated in answer to question 13, namely, 80.3 amperes.

(Deposition of C. L. Cory.)

Answer to Cross-interrogatory No. 15:

Yes, the power factor would decrease ordinarily if a fractional instead of a full load were used in operating the same machinery, meaning induction motors, but under such fractional load it would not be necessary to change the setting of the circuit-breaker, as the reduction in the amount of current required due to the fractional load instead of the full load [754] would probably more than make up for the increase in the current necessary due to the reduced power factor on account of the fractional load.

Answer to Cross-interrogatory No. 16:

I mean that synchronous motors are in general use in all parts of the country for a variety of purposes.

Answer to Cross-interrogatory No. 17:

It is impossible for me to answer your question by giving specifically the number of instances of synchronous motors of 300 horse-power or less, and also the number of induction motors of 300 horse-power or less, that are within my own knowledge in general use, but in the smaller sizes of motors unquestionably by far the greater number are of the induction type, while in the larger sizes synchronous motors are extensively used, due to a number of reasons, primarily perhaps because such synchronous motors can very readily be operated to produce power and at the same time be adjusted and controlled so as to regulate the power factor of the electrical system to which they are connected.

Answer to Cross-interrogatory No. 18:

Although I answered direct interrogatory No. 24

(Deposition of C. L. Cory.)

in the affirmative, and not in the negative, I answer "Yes" to this question.

Answer to Cross-interrogatory No. 19:

The value of a thirty-second starting surge of 600 horse-power based solely upon what a horse-power is worth per annum would result in a practically negligible value of the starting surge lasting thirty seconds. Specifically, if the [755] horse-power is worth \$87.00 per annum, the value of a single thirty-second starting surge of 600 horse-power would not exceed five cents, but the cost to the power company of providing machinery and transmission lines of sufficient size to allow such starting surges of twice the normal use would be very considerable, particularly if the starting surge of 600 horse-power is a relatively large fraction of the total capacity of the plant.

Answer to Cross-interrogatory No. 20:

A monthly stoppage of three or four hours in the use of current, or the reduction of the loads at change of shift time would not in any degree compensate for starting surges, even of only thirty seconds duration, if the power is furnished from the plant in question, which I know to have only 2600 horse-power capacity, even when there is all the water necessary available. These surges require an increase in the size of the plant, increasing the investment necessary, and what is of more serious consequence, such surges interfere with the service given by the plant to all other circuits or customers. These starting surges require current of very low



(Deposition of C. L. Cory.)

power factor in the starting of the induction motors, which low power factor more than anything else interferes with the satisfactory operation of the electrical machinery in the power house.

Answer to Cross-interrogatory No. 21:

Yes.

Answer to Cross-interrogatory No. 22:

Yes, but only in case power factor improving devices are used, making the power factor practically 100%, in addition to the induction motors as set forth in the question. My [756] answer would be "No," providing only induction motors without power factor improving devices were connected to the circuit at the load.

Answer to Cross-interrogatory No. 23:

No. I have answered all the questions bearing fully and at all times in mind that 300 real or actual horse-power is to be rendered available.

Answer to Cross-interrogatory No. 24:

I have in answering each question when the point is involved set forth the difference between what is called real as distinguished from apparent power.

Answer to Cross-interrogatory No. 25:

The assumptions of this question can not consistently be made to fit into the assumptions found in each separate question, and each answer with its explanation speaks for itself.

C. L. CORY.

(Deposition of C. L. Cory.)

Subscribed and sworn to before me this 21st day of February, A. D. 1913.

[Seal]

P. J. KENNEDY,  
Notary Public in and for the City and County of San  
Francisco, State of California. [757]

STATE OF CALIFORNIA,  
CITY AND COUNTY OF SAN FRANCISCO,—ss.

I, P. J. Kennedy, a duly appointed, qualified and acting Notary Public in and for the City and County of San Francisco, State of California, do hereby certify that the witness in the foregoing deposition named, C. L. CORY, was by me first duly sworn to testify to the truth, the whole truth, and nothing but the truth; that thereupon his foregoing deposition was taken by me in the City and County of San Francisco, State of California, on the 20th day of February, 1913, at the hour of two o'clock P. M. of said day, and thereafter until completed; that I propounded said direct interrogatories and cross-interrogatories to said witness; that said witness answered said interrogatories, both direct and cross, and his answers are fully set forth in the transcript of said deposition attached hereto. I further certify that Estelle Starstrand, a disinterested person, was appointed by me to act as shorthand reporter to take the testimony of said witness in shorthand, and thereafter reduce the same to longhand typewriting, and was by me first duly sworn for that purpose. That said answers of said witness C. L. CORY to said direct and cross-interrogatories were reduced to longhand typewriting by said Estelle Starstrand, and

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when completed as herein set forth, were carefully read by said witness, and after being corrected by him in every particular desired, were by him subscribed in my presence. That I thereupon wrapped and sealed the said deposition, and directed it to the Clerk of the District Court for the Territory of Alaska, Division No. 1, at Juneau, in which Court said action is pending, in the manner and pursuant to the terms of the stipulation of respective counsel for the respective parties attached hereto.

WITNESS my hand this 24th day of February, A. D. 1913.

[Seal]

P. J. KENNEDY,

Notary Public in and for the City and County of San Francisco, State of California. [758]

And the defendants, to further maintain the issues on their part, offered in evidence the deposition of W. J. Davis, the witness whose testimony was taken by deposition in the City of San Francisco and upon the stipulation attached to said deposition, and who testified on oath as narrated in said deposition, which said deposition of said W. J. Davis so taken was received and read in evidence and the testimony of the said W. J. Davis so given by deposition and received in evidence in this cause is as follows:

*In the District Court for the Territory of Alaska Division No. 1, at Juneau.*

Case No. 968-A.

ALASKA GASTINEAU MINING COMPANY,  
Plaintiff,

vs.

ALASKA TREADWELL GOLD MINING COMPANY, a Corporation, ALASKA UNITED GOLD MINING COMPANY, a Corporation, ALASKA MEXICAN GOLD MINING COMPANY, a Corporation, and ROBERT A. KINZIE,

Defendants.

**Stipulation.**

It is hereby stipulated that the deposition of W. J. Davis may be taken in response to the hereunto attached interrogatories, both direct and cross, and that such deposition may be taken before P. J. Kennedy, a notary public in and for the State of California, or before Grant H. Smith, a notary public in and for State of California, or before any other notary public without commission from the court; and when the deposition shall have been so taken it shall be returned by such notary, to the Clerk of the District Court, at Juneau, Alaska, as provided by law, and may be read in evidence on the trial in this case, subject to such objections as might be made if the witness were personally present and testifying orally

except that all objections as to the form of the question are hereby waived.

Dated this 30th day of January, 1913.

SHACKLEFORD & BAYLESS,  
Z. R. CHENEY,

Attorneys for Plaintiff.

HELLENTHAL & HELLENTHAL,  
Attorneys for Defendants. [759]

*In the District Court for the Territory of Alaska, Division No. 1, at Juneau.*

Case No. 968-A.

ALASKA GASTINEAU MINING COMPANY, a  
Corporation,

Plaintiff,

vs.

ALASKA TREADWELL GOLD MINING COMPANY, a Corporation, ALASKA UNITED GOLD MINING COMPANY, a Corporation, ALASKA MEXICAN GOLD MINING COMPANY, a Corporation, and ROBERT A. KINZIE,

Defendants.

**Interrogatories to be Propounded to W. J. Davis.**

Interrogatory No. 1:

State your name. Where do you reside?

Interrogatory No. 2:

What is your profession? State your calling.

Interrogatory No. 3:

If you state that you are by profession an electrical engineer, you may state fully at what school or

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schools you were educated as such electrical engineer, and what experience you have had as an electrical engineer. State in detail.

Interrogatory No. 4:

What is your present occupation and position, what duties do you perform in connection with the position occupied by you?

Interrogatory No. 5:

Do you know what constitutes a current of electricity of not to exceed 300 electric horse-power?

Interrogatory No. 6:

If you answer the preceding question by stating that you do know what constitutes a current of not to exceed 300 electric [760] horse-power, you may state of what such a current consists, stating your views fully and in detail upon this question.

Interrogatory No. 7:

What is the unit of electric power?

Interrogatory No. 8:

If you answer the preceding interrogatory by stating that a watt is the unit of electrical power, you may state what constitutes a watt.

Interrogatory No. 9:

The amperes and voltage of a three phase current being known, how do you determine the number of watts?

Interrogatory No. 10:

How many watts constitute an electric horse-power?

Interrogatory No. 11:

Where a current of not to exceed a given amount



(Deposition of C. L. Cory.)

of horse-power is spoken of and no mention is made of a power factor, what, if any, power factor is necessarily understood?

Interrogatory No. 12:

In a case where it is sought to make a current of not to exceed 300 horse-power available for the use of another, and nothing is said as to the use of which said power was to be applied, or the type of motors or other apparatus to be installed, or the manner or place of use, what power factor is understood, if any?

Interrogatory No. 13:

Where the place and manner of use is not specified, and the question of what type of motor, the place of use, the manner of installing the motor, and other matters [761] in connection with the operations of the motor, are left entire in the control of the person to whom the power is furnished and no particular power factor is mentioned or referred to, is it possible to supply any particular power factor as the power factor understood by the parties except unity power factor?

Interrogatory No. 14:

If you answer the preceding interrogatory by stating that it is not possible to supply or imply any power factor under the circumstances mentioned, except unity power factor, you may state your reasons why.

Interrogatory No. 15:

Where the current sought to be made available by a power company for the use of another is a current of not to exceed 300 electric horse-power to be taken

(Deposition of C. L. Cory.)

from and at the generating plant, and no mention is made of a power factor, and neither the type or form of motor to be used is specified or referred to, nor the place of use, the manner in which it is to be installed, how would you proceed to measure such a current, and what apparatus would you employ for that purpose is a case where the voltage is kept constant by means of a Tirril regulator?

Interrogatory No. 16:

Where an automatic instantaneous circuit-breaker is set so as to go out at about [762] 60 amperes on a three phase current with a voltage of 2300 impressed, would such apparatus permit the uninterrupted flow of a current of not to exceed 300 horsepower?

Interrogatory No. 17:

Where a current of not to exceed 300 electric horsepower is sought to be made available for the use of another, the current to be taken from and at the generating plant and no mention is made of a power factor, nothing being said concerning the type of motor, or other apparatus to be installed, or about the use to which the power is to be applied, as well as the type of motor used, the place of use, the manner of installing the motor, all being matters left to the control of the party to whom the power is furnished, could such a current be measured by means of a wattmeter which automatically takes in consideration the power factor?

Interrogatory No. 18:

You may state whether the power factor of the

(Deposition of C. L. Cory.)

various types of motors in use is the same.

Interrogatory No. 19:

You may state whether the power factor of a motor in use is constant, or whether the same varies depending upon the conditions of the load and other matters in connection with the operations carried on.

Interrogatory No. 20:

Can a synchronous motor be so adjusted and used so as to operate at unity power factor? [763]

Interrogatory No. 21:

Are synchronous motors in general use?

Interrogatory No. 22:

Can 300 electric horse-power be developed by means of a synchronous motor from a three phase current of about 56 amperes with a voltage of 2300 impressed?

Interrogatory No. 23:

At the generating plant will such a current furnish 300 horse-power for lighting purposes?

Interrogatory No. 24:

Can a motor requiring a current of 300 horse-power to operate be started with a current of 300 horse-power.

Interrogatory No. 25:

If you answer the preceding interrogatory by stating that such a motor cannot be started with the same amount of power that it requires to operate it, how much more power approximately does it require to start a simple squirrel cage motor of the induction type than it does to operate such motor?

Interrogatory No. 26:

(Deposition of C. L. Cory.)

What is the difference between the starting current and the running current of the various form of induction motors?

Interrogatory No. 27:

If a time relay circuit-breaker were installed on the transmission line of a motor requiring 300 horse-power to operate and such motor were operated by a current flowing over such line and the circuit-breaker being set to permit the flow of such current and such motor were brought [764] to a state of rest and were afterwards started and placed in operation would the current drawn at the time such motor was started be of greater horse-power than the current drawn when such motor was in continuous operation, the voltage being kept constant?

Interrogatory No. 28:

Would not a time relay circuit-breaker set so as to permit the flow of a current of 300 horse-power permit the taking of a current of greater horse-power for short periods of time?

Interrogatory No. 29:

Is there any other practical device by which the uninterrupted flow of a current could be limited to any given limit at all times except by means of an instantaneous circuit-breaker?

Interrogatory No. 30:

Where a current sought to be furnished or made available is to be a current of not to exceed a given electric horse-power, which, if any form of circuit-breaker is in general use, the instantaneous circuit-breaker or the time relay circuit-breaker?

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Interrogatory No. 31:

If you answer the preceding interrogatory by stating that the instantaneous circuit-breaker is the form in general use, you may state whether it is the proper appliance to be used for such purpose. [765]

Interrogatory No. 32:

If you answer the preceding interrogatory by stating that the instantaneous circuit-breaker is the proper appliance under the facts stated in the two preceding interrogatories, you may state why the use of such instantaneous circuit-breaker is proper. [766]

*In the District Court for the District of Alaska,  
Division No. 1, at Juneau.*

No. 968-A.

ALASKA GASTINEAU MINING COMPANY, a  
Corporation,

Plaintiff,

vs.

ALASKA TREADWELL GOLD MINING COM-  
PANY, a Corporation, ALASKA UNITED  
GOLD MINING COMPANY, a Corporation,  
ALASKA MEXICAN GOLD MINING COM-  
PANY, a Corporation, and ROBERT A.  
KINZIE,

Defendants.



**Cross-interrogatories to be Propounded to C. L.**

**Cory, W. J. Davis, C. E. Heise, E. A. Quinn,  
A. M. Hunt and H. C. Parker.**

**Cross-interrogatory No. 1:**

Are you or have you recently been in the employ of F. W. Bradley or any of his associates or of C. O. Mills or any of the defendant companies?

**Cross-interrogatory No. 2:**

Attached to these cross-interrogatories you will find a copy of the contract in dispute in this action and before answering any of the questions, either direct or cross, please read this contract and bear the same in mind in answering the questions addressed to you.

**Cross-interrogatory No. 3:**

Is it not a fact that induction motors are used upon three-phase alternating currents by power consumers much more than synchronous motors? [767]

**Cross-interrogatory No. 4:**

Where have you seen a synchronous motor in use upon a three-phase alternating current for a load of not to exceed 300 horse-power?

**Cross-interrogatory No. 5:**

Is not the power factor less than unity wherever induction motors are used upon a three-phase alternating current?

**Cross-interrogatory No. 6:**

If you answer the last cross-interrogatory in the negative, state the conditions under which you have observed a unity power factor in connection with the use of an induction motor of 300 horse-power or less.



Cross-interrogatory No. 7:

What is the ordinary device or instrument for measuring horse-power upon an electric current where it is the intention of the producer to sell and the consumer to purchase real as distinguished from apparent power?

Cross-interrogatory No. 8:

What is the accepted definition of power factor?

Cross-interrogatory No. 9:

Assuming in this case that it was the intention of the parties to deal in real and not apparent power and that the contract did not require the use of a synchronous motor and that the contract contemplated the use of the power contracted for in mining operations, would you not measure the power by means of a wattmeter and [768] set your circuit-breaker according to the reading of your ammeter and voltameter at the instant when your wattmeter showed a consumption of 300 real horse-power?

Cross-interrogatory No. 10:

Assuming that it was the intention of the parties to the contract that the 300 horse-power called for therein was to be used in ordinary mining operations, would it not be reasonable to expect that the power would be applied to induction motors?

Cross-interrogatory No. 11:

If you answer the last question in the negative, state what observation and experience you have had with reference to the use of motors in connection with mining which would justify you in assuming that synchronous motors are commonly used in mining operations upon loads of 300 horse-power or less.

## Cross-interrogatory No. 12:

If you answer direct interrogatory No. 16 to the effect that the apparatus mentioned in that interrogatory would permit the uninterrupted flow of a current not to exceed 300 horse-power, assume that the motor upon such current is an induction motor of the ordinary type and not a synchronous motor, can the benefit and use of 300 horse-power be secured under the conditions named in interrogatory [769] No. 18, would not a wattmeter indicate under such a setting that less than 300 horse-power was being taken?

## Cross-interrogatory No. 13:

If you answer direct interrogatory No. 19 in the affirmative, that is to the effect that the power factor will vary depending upon the condition of the load and other matters in connection with the operations carried on, assume for the purposes of this question that the contract called for the delivery of real and not apparent power, assume that the power factor is 70 instead of unity and that the voltage is 2,300 volts, at what amperage would your circuit-breaker be set so as to permit the use of 300 real horse-power?

## Cross-interrogatory No. 14:

Having answered the last question and assuming that the power factor is 70 when the full load of 300 horse-power is taken and that the power factor has been determined under normal conditions, if these conditions are maintained and not changed, should the circuit-breaker not remain as stated in answer to your last question?

## Cross-interrogatory No. 15:

Assuming the conditions named in the last two

cross-interrogatories, is it not a fact that the power [770] factor would decrease if a fractional instead of a full load were used in operating the same machinery? Under such fractional load, however, would you have to change the setting of the circuit-breaker so as to prevent the taking of more than the maximum of real power called for?

Cross-interrogatory No. 16:

If you answer direct interrogatory No. 21 in the affirmative, state what you mean by synchronous motors being in general use.

Cross-interrogatory No. 17:

If you answer direct interrogatory No. 21 in the affirmative, state specifically the number of instances of synchronous motors of 300 horse-power or less, within your own knowledge, that are in use and state also the number of induction motors of 300 horse-power or less that are in general use.

Cross-interrogatory No. 18:

If you answer direct interrogatory No. 24 in the negative, state whether a motor requiring 300 horse-power to operate can be started from a plant with sufficient water-power available to generate 300 horse-power.

Cross-interrogatory No. 19:

Assuming horse-power to be worth \$87.00 per annum, what is the value of a thirty-second starting surge of 600 horse-power? [771]

Cross-interrogatory No. 20:

Assuming ordinary stoppages at a mining plant and the lightening of loads at change of shift time and a monthly stoppage of three to four hours per month in using a current of 300 horse-power, would

not these stoppages ordinarily more than compensate for starting surges of thirty seconds occurring from four to five times during a month?

Cross-interrogatory No. 21:

Where the beneficial use of 300 horse-power is contemplated by the parties to a contract and synchronous motors are not contemplated but the ordinary type of motor is contemplated and in actual use, is it possible to obtain the uninterrupted and beneficial use of 300 horse-power without taking a starting surge of more than 300 horse-power?

Cross-interrogatory No. 22:

If the beneficial and uninterrupted use of 300 real horse-power is contemplated by the parties and ordinary types of induction motor are in use as contemplated, can such use be obtained with an instantaneous circuit-breaker set at 56 amperes with a voltage of 2,300 volts? [772]

Cross-interrogatory No. 23:

You have answered the direct interrogatories propounded by the defendants in this case. Is it not a fact that all of these answers are based upon the assumption of making available 300 apparent horse-power as distinguished from 300 real horse-power?

Cross-interrogatory No. 24:

If you answer the last question in the negative, point out how many and what of your answers, giving the number of the same, contemplate the use of real as distinguished from apparent power, assuming that the party to the contract contemplated the use of induction motors of the ordinary type and not the use of synchronous motors.



Cross-interrogatory No. 25:

Assuming that the direct interrogatories in this action, Nos. 5 to 32, inclusive, call upon you to answer in terms of real instead of apparent power and under ordinary conditions with reference to the use of induction motors, it being assumed that the use of induction motors of the ordinary type was contemplated by the parties, answer each one of the questions in terms of real power, under the assumption that the parties contemplated the use of induction motors [773] of the ordinary type.

SHACKLEFORD & BAYLESS,  
Z. R. CHENEY,

Attorneys for Plaintiff. [774]

THIS INDENTURE AND AGREEMENT made and entered into this 14th day of October, 1909, by and between Oxford Mining Company hereinafter called the lessor and The Alaska Treadwell Gold Mining Company, the Alaska Mexican Gold Mining Company and the Alaska United Gold P. J. K. Mining Company hereinafter called the N. P. lessees.

WITNESSETH, First, the lessor has this date and does by these presents lease unto the lessees all of the following described real property situated on and near Sheep Creek in the Harris Mining District, District of Alaska, to-wit:

The Mexico Mill-site U. S. Mineral Entry No. 25, lot 71 B. The Belvedere Mill-site U. S. Mineral Entry No. 25, lot 72 B. The Jumbo Mill-site U. S. Mineral Entry No. 60, lot No. 260. Also that certain piece or parcel of land beginning at a stake identical with post No. 2 Jumbo Mill-site U. S. Survey No.

260 on the meander line of Gastineau Channel; thence first course along the meander line of Gastineau Channel at ordinary high water mark

P. J. K. N.  $52^{\circ} 00'$  W. 54 feet to stake No. 2;

N. P. thence second course N.  $48 15'$  E. 200 feet to stake No. 3; thence S.  $52.00'$  E. 54 feet to the N. W. side line of Jumbo Mill-site U. S. Survey No. 260, 200 feet to stake No. 1, the place of beginning containing an area of one quarter of an acre more or less, courses expressed from the true meridian, Mag. Var.  $29.30'$ ; and also that certain water right known as the Sheep Creek Water Right and located on Sheep Creek about three-quarters of a mile from its mouth, together with the flume and pipe-line connecting the same with the beach near the mill at the mouth of the said Sheep Creek, also the saw-mill, boarding-house, lumber sheds, wharf landing, mill dam, flumes, penstocks, water-wheels, and all other machinery and appliances used in connection with said saw-mill, situated near the mouth of said Sheep Creek, together with all machinery, tools, equipment, plants of every kind and description now upon said property for a term of ten (10) years from the date hereof at a monthly rental of One Hundred and Twenty-five (\$125.00) Dollars per month; payable in gold coin of the United States on the first day of each month during the

P. J. K. term of said lease at the office of the lessees

N. P. at Treadwell, Alaska; and it is hereby agreed, that if any rent shall be due and unpaid, or if default shall be made in any of the covenants herein contained, that it shall be lawful



for the lessor to re-enter said premises and  
P. J. K. remove all persons therefrom, and the  
N. P. lessees do hereby covenant, promise and  
agree to pay the lessor the said rent in the  
manner hereinbefore specified, and not to let or  
underlet the whole or any part of said premises with-  
out a written consent of the lessor, nor to assign this  
lease or any part thereof without said written con-  
sent, and at the expiration of said term the party of  
the second part will quit and surrender said prem-  
ises in as good state and condition as the same now  
are.

P. J. K. It is the intention of the lessees to erect,  
N. P. equip and maintain upon said premises a  
water-power plant of substantial size and  
efficiency for the generation of electric power, and  
if at any time after Two (2) years from the date  
hereof the lessor or its assigns shall elect to take a  
current of not to exceed three hundred (300) electric  
horse-power which shall be taken from and at the  
generating plant to be installed upon the leased  
premises hereinbefore described, the lessees under-  
take, covenant and agree to deliver said current to  
the lessor or its assigns upon the execution and deliv-  
ery by the lessor or its assigns to the lessee of a deed  
or deeds conveying said leased property

P. J. K. herein described to the parties of the sec-  
N. P. ond part. If prior to the expiration of  
nine years from the date hereof the lessor  
does not elect to convey to lessees or their

P. J. K. [775] assigns the property herein leased  
N. P. and accept in full consideration therefor

the right to the use of the three hundred (300) electric horse-power hereinbefore mentioned, the lessees may at their option prior to the expiration of the ten (10) years provided in this lease purchase the property herein leased absolutely from the lessor by paying to the lessor the sum of Twenty-five Thousand Dollars (\$25,000.) in gold coin of the United States; and the lessor covenants and agrees upon tender of said sum of Twenty-five Thousand Dollars (\$25,000.) to execute and deliver such deeds of conveyance to the property herein leased as hereinbefore specified, excepting only as to the title to (1) the one-quarter acre tract hereinbefore described and (2) the premises occupied and used by the existing wharf of the lessor to both of which the lessor now asserts only possessory titles. The lessees may at their own cost and expense undertake to perfect the said titles and should lessee wish so to do the lessor shall lend all proper assistance in its power including the using of its name, and should the said titles be so perfected to the said premises or either of them, they shall become the property of

P. J. K. the lessor and remain covered by this lease

N. P. and subject to all the terms and conditions thereof.

The covenants herein contained shall be construed as running with the land and as a charge

P. J. K. thereon, so that any successor or successors

N. P. in interest to the lessor and or to the said land shall be bound by this conveyance in the same manner as if they had executed this agreement; and the lessees hereof may require at their

option that the property herein described by conveyed by the lessor to a responsible Trustee for the purpose of carrying out the terms of this agreement, or that deeds and conveyances covering the property herein leased be placed in escrow so as to insure delivery of the same if required under the provisions of any of the covenants of this lease.

P. J. K. If neither of the options herein provided  
N. P. for are accepted by either the lessor or the lessees then the property and rights herein described with all the improvements that are or that may be hereafter placed on the said premises shall be and become the property of the lessor.

The provisions herein as to the delivery of three hundred (300) horse-power at the generating plant to be installed on the premises herein described contemplates the delivery of an uninterrupted current, but the lessees shall not be liable for damages that may arise from operating and physical causes beyond its control.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands and seals the day and year first above written. Executed in triplicate.

Witness:

HAROLD LAWRENCE.

WALTER W. BLACK.

OXFORD MINING COMPANY,

WALLACE HACKETT,

President.

And HENRY ENDICOTT,

Treasurer.

ALASKA TREADWELL GOLD MINING  
COMPANY,

By H. H. TAYLOR,

President.

F. A. HAMMERSMITH,

Secretary.

ALASKA MEXICAN GOLD MINING CO.

By H. H. TAYLOR,

President.

F. A. HAMMERSMITH,

Secretary.

ALASKA UNITED GOLD MINING CO.

By H. H. TAYLOR,

President.

F. A. HAMMERSMITH,

Secretary. [776]

State of California,

City and County of San Francisco,—ss.

On this 12th day of November in the year One Thousand Nine Hundred and Nine, before me, P. J. Kennedy, a Notary Public, in and for said City and County, residing therein, duly commissioned and sworn, personally appeared H. H. Taylor, and F. A. Hammersmith known to me to be the President and Secretary respectively of Alaska Mexican Gold Mining Company and Alaska United Gold Mining Co., the corporations that executed the within and foregoing instrument, and to be the officers who executed the said instrument on behalf of said Corporations therein named, and they acknowledged to me that such Corporations executed the same.

In Witness Whereof, I have hereunto set my hand



and affixed my official seal, at my office, in the said City and County of San Francisco, the day and year last above written.

[Seal]

F. J. KENNEDY,

Notary Public in and for the City and County of  
San Francisco, State of California.

State of California,

City and County of San Francisco,—ss.

On this 12th day of November in the year One Thousand Nine Hundred and Nine, before me, P. J. Kennedy, a Notary Public, in and for said City and County, residing therein, duly commissioned and sworn, personally appeared H. H. Taylor and F. A. Hammersmith known to me to be the President and Secretary respectively of Alaska Treadwell Gold Mining Co., the Corporation that executed the within and foregoing instrument and to be the officers who executed the said instrument on behalf of said Corporation therein named, and they acknowledged to me that such Corporation executed the same.

In Witness Whereof, I have hereunto set my hand and affixed my official seal at my office, in the said City and County of San Francisco, the day and year last above written.

[Seal]

P. J. KENNEDY,

Notary Public in and for the City and County of  
San Francisco, State of California.

Commonwealth of Massachusetts,

County of Suffolk,

City of Boston,—ss.

Be it remembered, that on this 14th day of October, 1909, before me, the undersigned, a Notary Pub-

lie in and for said County and State, personally appeared Wallace Hackett, President, and Henry Endicott, Treasurer, of the Oxford Mining Company, a Corporation organized under the laws of the State of Maine, to me known to be the individuals described in and who executed the foregoing instrument as such president and Treasurer; and said Henry Endicott having affixed the seal of said Corporation to said instrument, they severally acknowledged to me that he, Wallace Hackett, as President, and he, Henry Endicott, as Treasurer of said Corporation, executed the foregoing instrument for and on behalf of said Corporation as the free and voluntary act of said corporation for the uses and purposes therein set forth. Then the said Henry Endicott, being by me first duly sworn on his oath states that he is Treasurer of said Corporation, is acquainted and is the custodian, and has in his possession the corporate seal of said Corporation, and that the seal hereinbefore affixed is the corporate seal of said Corporation, and was affixed by him as such Treasurer by order of the Board of Directors of said Corporation.

In Witness Whereof, I have hereunto set my hand and seal the day and year first above written.

[Seal]

LLOYD A. FROST,  
Notary Public.

My commission expires Dec. 5th, 1913. [777]



*In the District Court for the Territory of Alaska,  
Division No. 1, at Juneau.*

Case No. 968—A.

ALASKA GASTINEAU MINING COMPANY, (a  
Corporation),

Plaintiff,

vs.

ALASKA TREADWELL GOLD MINING COM-  
PANY (a Corporation), ALASKA UNITED  
GOLD MINING COMPANY (a Corpora-  
tion), ALASKA MEXICAN GOLD MIN-  
ING COMPANY (a Corporation), and ROB-  
ERT A. KINZIE,

Defendants.

**Deposition of Wm. J. Davis, Jr. [for Defendants].**

BE IT REMEMBERED that pursuant to the stipulation of Counsel for the respective parties in the above-entitled action, attached hereto, together with the interrogatories, both direct and cross, also attached hereto, on the 20th day of February, 1913, in the City and County of San Francisco, State of California, before me, P. J. Kennedy, a Notary Public in and for the City and County of San Francisco, State of California, personally appeared Wm. J. Davis, Jr., a witness produced on behalf of the defendants in the above-entitled action, now pending in said Court, who being by me first duly sworn to testify to the truth, the whole truth, and nothing but the truth in said cause, and to whom I propounded said interrogatories, both direct and cross, testified as follows: [778]

(Deposition of Wm. J. Davis, Jr.)

Answer to Direct Interrogatory No. 1:

Wm. J. Davis, Jr.; San Francisco, California.

Answer to Direct Interrogatory No. 2:

Electrical and Mechanical Engineer.

Answer to Direct Interrogatory No. 3:

Graduate of Rose Polytechnic Institute, degree B. S.; also Post-graduate Degree M. S.; member of American Institute of Electrical Engineers; member of American Society of Mechanical Engineers; Associate Member of American Institute of Mining Engineers; Associate Member of American Electro-Chemical Society; Twenty years as Electrical Engineer with the General Electric Company as designer of electric generators, motors, electric locomotives and other apparatus, power plants and railway systems. Engineer in charge of design and construction of electrical installation of Albany and Hudson Railway & Power Co., Detroit River Tunnel electrification, Havana Central Railway, West Jersey & Sea Shore Railroad; participated in New York Central terminal electrification and construction of numerous interurban railroads in this country and abroad.

Answer to Direct Interrogatory No. 4:

Present occupation—Engineer, Pacific Coast District, General Electric Company. Have charge of all construction work for Company in this district. Since taking present position, have been responsible for installation of electrical equipment of steam turbine and hydraulic plants exceeding 300,000 H. P., the most prominent of these being the Big Bend

(Deposition of Wm. J. Davis, Jr.)

plant of the [779] Great Western Power Company on the Feather River, the hydraulic power plant of the Sierra & San Francisco Power Company on the Stanislaus River, and steam turbine plants of the Pacific Gas & Electric Company, Great Western Power Company, Southern California Edison Company, and Pacific Light & Power Corporation of Los Angeles.

Answer to Direct Interrogatory No. 5:

Yes.

Answer to Direct Interrogatory No. 6:

A current of not to exceed 300 electric h. p. will be that quantity of electric current which would exist in an electric circuit, the voltage being constant, when 223,800 units of electric power are being delivered. This is always true without modification in case of a direct current system, but in case of an alternating current system, the nature of the machinery or apparatus utilizing the electric power may be such as to cause a distortion or angular change in the relationship of voltage or electric pressure of the current which would increase the amount of electric current as determined above.

Answer to Direct Interrogatory No. 7:

The absolute unit of electric power is called a watt. The commercial unit consists of a thousand watts and is known as a kilowatt.

Answer to Direct Interrogatory No. 8:

A watt may be defined as the amount of power produced by an electric current of one ampere when flowing under the direct and immediate action of an

(Deposition of Wm. J. Davis, Jr.)

electric pressure of one volt. The number of watts delivered by an electric circuit is measured by the product of the instantaneous values of volts and amperes. [780]

Answer to Direct Interrogatory No. 9:

The amperes and voltage of a 3-phase system, as measured by the usual instruments, represent the average values of these quantities. The number of watts may be determined by the product of volts times amperes times 1.73, the latter being a constant for a 3-phase system, provided the nature of the load is such as to cause no displacement in the effective relationship of the current and voltage to each other.

Answer to Direct Interrogatory No. 10:

An electric horse-power consists of 746 watts.

Answer to Direct Interrogatory No. 11:

According to the standardization Rules of the American Institute of Electrical Engineers, which are generally accepted as authoritative, the power factor of a system is understood to be unity unless otherwise stated. The specific rule applying to this question is known as No. 74-A and may be found in the August, 1911, number of the Proceedings of the American Institute of Electrical Engineers. This rule, which I and other engineers adopt in our practice, is as follows:

“Power Factor. Since the inherent capacity of alternating current generators, synchronous motors, and transformers, depend upon their voltage and their current, they should be rated in kilovolt-amperes. If the apparatus is rated

(Deposition of Wm. J. Davis, Jr.)

in kilowatts without specification as to the power factor, a power factor of 100 per cent shall be understood.

If rated in kilowatts and a power factor other than 100 per cent be specified, this should be understood as defining only the nature of the load, and not as implying an increase in the ampere rating of the apparatus, which should be based upon the kilowatt rating at 100 per cent power factor."

Answer to Direct Interrogatory No. 12:

Under the conditions stated, a power factor of 100 per cent would be understood. [781]

Answer to Direct Interrogatory No. 13:

No.

Answer to Direct Interrogatory No. 14:

Bearing in mind the conditions given in Interrogatory No. 13, my reasons for stating that it is not possible to supply or imply any particular power factor under the circumstances mentioned are as follows:

a. The power factor of any system taking electric current at a given point is dependent upon the nature of the load and character of the apparatus to which power is supplied and on no other conditions.

b. The capacity of generators, transformers, instruments, switches and feeder system of the parties furnishing the power is fixed by the amount of current taken and not necessarily by the power as determined by wattmeter readings.

c. The power factor being variable and beyond



(Deposition of Wm. J. Davis, Jr.)

the control of the operators, it must be assumed as not materially less than unity in order to determine the proper limit of the current to be taken.

Answer to Direct Interrogatory No. 15:

I would proceed to measure such current by means of an ammeter.

Answer to Direct Interrogatory No. 16:

Yes.

Answer to Direct Interrogatory No. 17:

A wattmeter would not be suitable for measuring the electric current under the conditions stated.

Answer to Direct Interrogatory No. 18:

No.

Answer to Direct Interrogatory No. 19:

The power factor of motors is variable, depending upon the conditions of the load and the inherent characteristics of [782] the motors.

Answer to Direct Interrogatory No. 20:

Yes, approximately.

Answer to Direct Interrogatory No. 21:

Yes.

Answer to Direct Interrogatory No. 22:

Yes.

Answer to Direct Interrogatory No. 23:

Yes.

Answer to Direct Interrogatory No. 24:

Yes, under certain conditions depending upon the method of starting and nature of devices used, also upon relation of starting torque to full rated torque.

Answer to Direct Interrogatory No. 25:

A simple squirrel cage motor may in many cases

(Deposition of Wm. J. Davis, Jr.)

be started with less than full load current if the proper devices are used. Under conditions where the motor is required to start under full load torque, the current taken from the line will be about three times the rated current of the motor when starting compensators are used, and if compensators are not used or the starting torque greatly exceeds the full load torque, the starting current may be five and one-half to six times full rated current.

Answer to Direct Interrogatory No. 26:

There are two types of induction motors in general use—the “squirrel cage” type and the “slip ring” type. The slip ring type of motor is started by a resistance in the rotor circuit and the starting current is usually about one-half to one-third that of the squirrel cage motor. The slip ring motor may usually be started under full load torque conditions at one and one-quarter [783] to one and one-half times full load current, and if the starting torque can be sufficiently reduced by mechanical or other devices, the starting current may be less than full load current.

Answer to Direct Interrogatory No. 27:

Not necessarily, for the reason that it is usually feasible to use a method of starting which will reduce the current demand to a minimum.

Answer to Direct Interrogatory No. 28:

Yes.

Answer to Direct Interrogatory No. 29:

I know of no other device than the automatic circuit-breaker.

(Deposition of Wm. J. Davis, Jr.)

Answer to Direct Interrogatory No. 30:

The instantaneous circuit-breaker is generally used unless a time limit is specified in the power contract.

Answer to Direct Interrogatory No. 31:

Yes, it is.

Answer to Direct Interrogatory No. 32:

The use of an instantaneous circuit-breaker is proper because it protects the system against injury due to the possibility of the demand for power exceeding the capacity of the system. It is also used to protect the system against injurious variations in voltage caused by excessive fluctuations in load at a particular point. The latter service is often of greater value than the former as the indirect losses from injuries to service may be many times greater than the direct losses due to overloading or other damage to the apparatus. [784]

Answer to Cross-interrogatory No. 1:

No.

Answer to Cross-interrogatory No. 2:

Have read the contract in question.

Answer to Cross-interrogatory No. 3:

Yes, in the small sizes, but in the large sizes, synchronous motors are more generally used. About three-fourths of the load carried by the Stanislaus plant of the Sierra & San Francisco Power Company consists of synchronous motors. There are fourteen of these motors rated at 1500 Kw. each (total 21,000 Kw.).

Answer to Cross-interrogatory No. 4:

I have seen not more than three or four of these

(Deposition of Wm. J. Davis, Jr.)

synchronous motors at the Schenectady Works of the General Electric Company. The General Electric manufactures standard synchronous motors of 250 and 100 I. P., but for various reasons the demand for these small synchronous motors is restricted.

Answer to Cross-interrogatory No. 5:

Not materially less than unity if proper corrective devices are provided.

Answer to Cross-interrogatory No. 6:

I have observed unity power factor upon systems where synchronous motors or condensers were used to regulate the power factor.

Answer to Cross-interrogatory No. 7:

If by "real" power is meant kilowatts and by "apparent" power is meant kilovolt-amperes, a wattmeter would be the proper [785] instrument to use for measuring the former and an ammeter and voltameter for measuring the latter.

Answer to Cross-interrogatory No. 8:

Power factor is usually defined as the ratio of watts to volt-amperes.

Answer to Cross-interrogatory No. 9:

While the wattmeter could successfully be used for determining the energy component of the current under full load conditions, the setting of the circuit-breaker under such conditions would be indefinite and indeterminate, because the power factor would be variable.

Answer to Cross-interrogatory No. 10:

Not necessarily, as the power may be used for a large number of miscellaneous purposes, such as lighting

(Deposition of Wm. J. Davis, Jr.)

and electrolytic work, tram-ways, etc., requiring direct current where the character of the load would be such as to give unity power factor.

Answer to Cross-interrogatory No. 11:

Synchronous motors are frequently used to drive air compressors and to convert alternating current into direct current for the operation of mine locomotives.

Answer to Cross-interrogatory No. 12:

If the plant equipment were properly broken up into a number of small units instead of one large one and the power factor corrected by the use of a rotary condenser or other device in common use, my answer to this question would be No.

Answer to Cross-interrogatory No. 13:

81 amperes. [786]

Answer to Cross-interrogatory No. 14:

Yes, if it is the intention to deliver 300 H. P. at 70% power factor.

Answer to Cross-interrogatory No. 15:

No, it would not be necessary to change the setting of the circuit-breaker.

Answer to Cross-interrogatory No. 16:

Synchronous and induction motors occupy different fields. The induction motor is the cheaper in the smaller sizes and simpler to operate as no auxiliary exciter is required. In large units, however, there is little difference in price but the synchronous motor is usually preferred on account of higher efficiency and power factor, closer speed regulation and greater reliability due to possibility of using large clearances



(Deposition of Wm. J. Davis, Jr.)

between the moving and stationary elements.

Answer to Cross-interrogatory No. 17:

The only small synchronous motors used in this district of which I have direct knowledge are two 200 Kw. units operating on the system of the Oro Water, Light & Power Company and used until recently as power factor regulators, but which have since been replaced by larger machines. On the other hand, there are thousands of induction motors of less than 300 H. P. in general use on the Pacific Coast.

Answer to Cross-interrogatory No. 18:

This question was not answered in the negative.

Answer to Cross-interrogatory No. 19:

The value in kilowatts of a thirty second starting surge of 600 H. P. as measured by the amount of water used will be 5¢, but the value as representing interest charges, maintenance [787] and operating costs applying to generator, transformer and distributing capacity will vary from \$20,000 to \$50,000 per annum.

Answer to Cross-interrogatory No. 20:

No, on account of the bad effect on the regulation of a system such as the one under consideration, which I am informed has a capacity of only 2000 kw. The effect of the low power factor of a 300 H. P. squirrel cage induction motor when starting would ordinarily be three to nine times as bad as would be the case if the motor were started at unity power factor. The indirect losses from such injury to the regulation might prove to be a serious matter.

(Deposition of Wm. J. Davis, Jr.)

Answer to Cross-interrogatory No. 21:

Yes.

Answer to Cross-interrogatory No. 22:

Yes, if devices be used to raise the power factor to the proper amount.

Answer to Cross-interrogatory No. 23:

No.

Answer to Cross-interrogatory No. 24:

My answer to this question is that corrective devices may be used to improve the power factor where objectionably low.

Answer to Cross-interrogatory No. 25:

These assumptions conflict with the assumptions made in the direct interrogatories and the replies thereto are not restricted to the conditions outlined in this cross-interrogatory. In answering the direct interrogatories, I have had in mind the kilowatts consumed, understanding that it is perfectly feasible [788] to use corrective devices for improving the power factor.

WM. M. J. DAVIS, JR.

Subscribed and sworn to before me this 21st day of February, A. D. 1913.

[Seal]

P. J. KENNEDY,

Notary Public in and for the City and County of San Francisco, State of California. [789]

State of California,

City and County of San Francisco,—ss.

I, P. J. Kennedy, a duly appointed, qualified and acting Notary Public in and for the City and County

(Deposition of Wm. J. Davis, Jr.)

of San Francisco, State of California, do hereby certify that the witness in the foregoing deposition named, Wm. J. Davis, Jr., was by me first duly sworn to testify to the truth, the whole truth, and nothing but the truth; that thereupon his foregoing deposition was taken by me in the City and County of San Francisco, State of California, on the 20th day of February, 1913, at the hour of two o'clock P. M. of said day, and thereafter until completed; that I propounded said direct interrogatories and cross-interrogatories to said witness; that said witness answered said interrogatories, both direct and cross, and his answers are fully set forth in the transcript of said deposition attached hereto. I further certify that Estelle Starstrand, a disinterested person, was appointed by me to act as shorthand reporter to take the testimony of said witness in shorthand, and thereafter reduce the same to longhand typewriting, and was by me first duly sworn for that purpose. That said answers of said witness Wm. J. Davis, Jr., to said direct and cross-interrogatories were reduced to longhand typewriting by said Estelle Starstrand, and when completed as herein set forth, were carefully read over by said witness, and after being corrected by him in every particular desired, were by him subscribed in my presence. That I thereupon wrapped and sealed the said deposition, and directed it to the Clerk of the District Court of the Territory of Alaska, Division No. 1, at Juneau, in which court said action is pending, in the manner and pursuant to the terms of the stipulation of respective counsel

for the respective parties attached hereto.

WITNESS my hand this 21st day of February, A. D. 1913.

[Seal]

P. J. KENNEDY,

Notary Public in and for the City and County of San Francisco, State of California. [790]

And the defendants to further maintain the issues on their part offered in evidence the deposition of A. M. Hunt, the witness whose testimony was taken by deposition in the City of San Francisco and upon the stipulation attached to said deposition, and who testified on oath as narrated in said deposition, which said deposition of said A. M. Hunt so taken was received and read in evidence and the testimony of the said A. M. Hunt so given by deposition and received in evidence in this cause is as follows:

*In the District Court for the Territory of Alaska,  
Division No. 1, at Juneau.*

Case No. 968-A.

ALASKA GASTINEAU MINING COMPANY,  
Plaintiff,

vs.

ALASKA TREADWELL GOLD MINING COMPANY, a Corporation, ALASKA UNITED GOLD MINING COMPANY, a Corporation, ALASKA MEXICAN GOLD MINING COMPANY, a Corporation, and ROBERT A. KINZIE,

Defendant.

### **Stipulation.**

It is hereby stipulated that the deposition of A. M. Hunt may be taken in response to the hereunto attached interrogatories, both direct and cross, and that such deposition may be taken before P. J. Kennedy, a notary public in and for the State of California, or before Grant H. Smith, a notary public in and for State of California, or before any other notary public, without commission from the Court; and when the deposition shall have been so taken it shall be returned by such notary, to the Clerk of the District Court, at Juneau, Alaska, as provided by law, and may be read in evidence on the trial in this case, subject to such objections as might be made if the witness were personally present and testifying orally except that all objections as to the form of the question are hereby waived.

Dated this 30th day of January, 1913.

SHACKLEFORD & BAYLESS,  
Z. R. CHENEY,

Attorneys for Paintiff.

HELLENTHAL & HELLENTHAL,

Attorneys for Defendants. [791]



*In the District Court for the Territory of Alaska,  
Division No. 1, at Juneau.*

Case No. 968-A.

ALASKA GASTINEAU MINING COMPANY, a  
Corporation,

Plaintiff,

vs.

ALASKA TREADWELL GOLD MINING COM-  
PANY, a Corporation, ALASKA UNITED  
GOLD MINING COMPANY, a Corporation,  
ALASKA MEXICAN GOLD MINING  
COMPANY, a Corporation, and ROBERT A.  
KINZIE,

Defendants.

**Interrogatories to be Propounded to A. M. Hunt.**

Interrogatory No. 1:

State your name, where do you reside?

Interrogatory No. 2:

What is your profession. State your calling.

Interrogatory No. 3:

If you state that you are by profession an electrical engineer, you may state fully at what school or schools you were educated as such electrical engineer, and what experience you have had as an electrical engineer. State in detail.

Interrogatory No. 4:

What is your present occupation and position, what duties do you perform in connection with the position occupied by you?

Interrogatory No. 5:

Do you know what constitutes a current of electricity of not to exceed 300 electric horse-power?

Interrogatory No. 6:

If you answer the preceding question by stating that you do know what constitutes a current of not to exceed 300 electric [792] horse-power, you may state of what such a current consists, stating your views fully and in detail upon this question.

Interrogatory No. 7:

What is the unit of electric power?

Interrogatory No. 8:

If you answer the preceding interrogatory by stating that a watt is the unit of electrical power, you may state what constitutes a watt.

Interrogatory No. 9:

The amperes and voltage of a three phase current being known, how do you determine the number of watts?

Interrogatory No. 10:

How many watts constitute an electric horse-power?

Interrogatory No. 11:

Where a current of not to exceed a given amount of horse-power is spoken of and no mention is made of a power factor, what, if any power factor is necessarily understood?

Interrogatory No. 12:

In a case where it is sought to make a current of not to exceed 300 horse-power available for the use of another, and nothing is said as to the use of which said power was to be applied, or the type of motors or other apparatus to be installed, or the manner or

place of use, what power factor is understood, if any?  
Interrogatory No. 13:

Where the place and manner of use is not specified, and the question of what type of motor, the place of use, the manner of installing the motor, and other matters [793] in connection with the operations of the motor, are left entire in the control of the person to whom the power is furnished and no particular power factor is mentioned or referred to, is it possible to supply any particular power factor as the power factor understood by the parties except unity power factor.

Interrogatory No. 14:

If you answer the preceding interrogatory by stating that it is not possible to supply or imply any power factor under the circumstances mentioned, except unity power factor, you may state your reasons why.

Interrogatory No. 15:

Where the current sought to be made available by a power company for the use of another is a current of not to exceed 300 electric horse-power to be taken from and at the generating plant, and no mention is made of a power factor, and neither the type or form of motor to be used is specified or referred to, nor the place of use, the manner in which it is to be installed, how would you proceed to measure such a current, and what apparatus would you employ for that purpose in a case where the voltage is kept constant by means of a Tirril regulator?

Interrogatory No. 16:

Where an automatic instantaneous circuit-breaker

is set so as to go out at about [794] 60 amperes on a three phase current with a voltage of 2300 impressed, would such apparatus permit the uninterrupted flow of a current of not to exceed 300 horsepower?

Interrogatory No. 17:

Where a current of not to exceed 300 electric horsepower is sought to be made available for the use of another, the current to be taken from and at the generating plant and no mention is made of a power factor, nothing being said concerning the type of motor, or other apparatus to be installed, or about the use to which the power is to be applied, as well as the type of motor used, the place of use, the manner of installing the motor, all being matters left to the control of the party to whom the power is furnished, could such a current be measured by means of a wattmeter which automatically takes in consideration the power factor?

Interrogatory No. 18:

You may state whether the power factor of the various types of motors in use is the same.

Interrogatory No. 19:

You may state whether the power factor of a motor in use is constant, or whether the same varies depending upon the conditions of the load and other matters in connection with the operations carried on.

Interrogatory No. 20:

Can a synchronous motor be so adjusted and used so as to operate at unity power factor? [795]

Interrogatory No. 21:

Are synchronous motors in general use?

Interrogatory No. 22:

Can 300 electric horse-power be developed by means of a synchronous motor from a three phase current of about 56 amperes with a voltage of 2300 impressed?

Interrogatory No. 23:

At the generating plant will such a current furnish 300 horse-power for lighting purposes?

Interrogatory No. 24:

Can a motor requiring a current of 300 horse-power to operate be started with a current of 300 horse-power?

Interrogatory No. 25:

If you answer the preceding interrogatory by stating that such a motor cannot be started with the same amount of power that it requires to operate it, how much more power approximately does it require to start a simple squirrel cage motor of the induction type than it does to operate such motor?

Interrogatory No. 26:

What is the difference between the starting current and the running current of the various forms of induction motors?

Interrogatory No. 27:

If a time relay circuit-breaker were installed on the transmission line of a motor requiring 300 horse-power to operate and such motor were operated by a current flowing over such line and the circuit-breaker being set to permit the flow of such current and such motor were brought [796] to a state of rest and were afterwards started and placed in operation would the current drawn at the time such motor was



started be of greater horse-power than the current drawn when such motor was in continuous operation, the voltage being kept constant?

Interrogatory No. 28:

Would not a time relay circuit-breaker set so as to permit the flow of a current of 300 horse-power permit the taking of a current of greater horse-power for short periods of time?

Interrogatory No. 29:

Is there any other practical device by which the uninterrupted flow of a current could be limited to any given limit at all times except by means of an instantaneous circuit-breaker?

Interrogatory No. 30:

Where a current sought to be furnished or made available is to be a current of not to exceed a given electric horse-power, which, if any form of circuit-breaker is in general use, the instantaneous circuit-breaker or the time relay circuit breaker?

Interrogatory No. 31:

If you answer the preceding interrogatory by stating that the instantaneous circuit-breaker is the form in general use, you may state whether it is the proper appliance to be used for such purpose. [797]

Interrogatory No. 32:

If you answer the preceding interrogatory by stating that the instantaneous circuit-breaker is the proper appliance under the facts stated in the two preceding interrogatories, you may state why the use of such instantaneous circuit-breaker is proper. [798]

*In the District Court for the District of Alaska, Division No. 1, at Juneau.*

No. 968-A.

ALASKA GASTINEAU MINING COMPANY, a  
Corporation,

Plaintiff,

vs.

ALASKA TREADWELL GOLD MINING COMPANY, a Corporation, ALASKA UNITED GOLD MINING COMPANY, a Corporation, ALASKA MEXICAN GOLD MINING COMPANY, a Corporation, and ROBERT A. KINZIE,

Defendants.

**Cross-interrogatories to be Propounded to C. L. Corey, W. J. Davis, C. E. Heise, E. A. Quinn, A. M. Hunt and H. C. Parker.**

Cross-interrogatory No. 1:

Are you or have you recently been in the employ of F. W. Bradley or any of his associates or of O. Mills or any of the defendant companies?

Cross-interrogatory No. 2:

Attached to these cross-interrogatories you will find a copy of the contract in dispute in this action and before answering any of the questions, either direct or cross, please read this contract and bear the same in mind in answering the questions addressed to you.

Cross-interrogatory No. 3:

Is it not a fact that induction motors are used upon

three-phase alternating currents by power consumers much more than synchronous motors? [799]

Cross-interrogatory No. 4:

Where have you seen a synchronous motor in use upon a three-phase alternating current for a load of not to exceed 300 horse-power?

Cross-interrogatory No. 5:

Is not the power factor less than unity wherever induction motors are used upon a three-phase alternating current?

Cross-interrogatory No. 6:

If you answer the last cross-interrogatory in the negative, state the conditions under which you have observed a unity power factor in connection with the use of an induction motor of 300 horse-power or less.

Cross-interrogatory No. 7:

What is the ordinary device or instrument for measuring horse-power upon an electric current where it is the intention of the producer to sell and the consumer to purchase real as distinguished from apparent power?

Cross-interrogatory No. 8:

What is the accepted definition of power factor?

Cross-interrogatory No. 9:

Assuming in this case that it was the intention of the parties to deal in real and not apparent power and that the contract did not require the use of a synchronous motor and that the contract contemplated the use of the power contracted for in mining operations, would you not measure the power by means of a wattmeter and set your circuit-breaker [800] according to the reading of your ammeter and

voltemeter at the instant when your wattmeter showed a consumption of 300 real horse-power.

Cross-interrogatory No. 10:

Assuming that it was the intention of the parties to the contract that the 300 horse-power called for therein was to be used in ordinary mining operations, would it not be reasonable to expect that the power would be applied to induction motors?

Cross-interrogatory No. 11:

If you answer the last question in the negative, state what observation and experience you have had with reference to the use of motors in connection with mining which would justify you in assuming that synchronous motors are commonly used in mining operations upon loads of 300 horse-power or less.

Cross-interrogatory No. 12:

If you answer direct interrogatory No. 16 to the effect that the apparatus mentioned in that interrogatory would permit the uninterrupted flow of a current not to exceed 300 horse-power, assume that the motor upon such current is an induction motor of the ordinary type and not a synchronous motor, can the benefit and use of 300 horse-power be secured under the conditions named in interrogatory No. 18, would not a wattmeter [801] indicate under such a setting that less than 300 horse-power was being taken?

Cross-interrogatory No. 13:

If you answer direct interrogatory No. 19 in the affirmative, that is to the effect that the power factor will vary depending upon the condition of the load and other matters in connection with the operations

carried on, assume for the purposes of this question that the contract called for the delivery of real and not apparent power, assume that the power factor is 70 instead of unity and that the voltage is 2300 volts, at what amperage would your circuit-breaker be set so as to permit the use of 300 real horse-power?

Cross-interrogatory No. 14:

Having answered the last question and assuming that the power factor is 70 when the full load of 300 horse-power is taken and that the power factor has been determined under normal conditions, if these conditions are maintained and not changed, should the circuit-breaker not remain as stated in answer to your last question?

Cross-interrogatory No. 15:

Assuming the conditions named in the last two cross-interrogatories, is it not a fact that the power factor would decrease if a fractional instead of a full load were used in operating the same machinery? Under such fractional [802] load, however, would you have to change the setting of the circuit-breaker so as to prevent the taking of more than the maximum of real power called for?

Cross-interrogatory No. 16:

If you answer direct interrogatory No. 21 in the affirmative, state what you mean by synchronous motors being in general use.

Cross-interrogatory No. 17:

If you answer direct interrogatory No. 21 in the affirmative, state specifically the number of instances of synchronous motors of 300 horse-power or less, within your own knowledge, that are in use and state



also the number of induction motors of 300 horse-power or less that are in general use.

Cross-interrogatory No. 18:

If you answer direct interrogatory No. 24 in the negative, state whether a motor requiring 300 horse-power to operate can be started from a plant with sufficient water-power available to generate 300 horse-power.

Cross-interrogatory No. 19:

Assuming horse-power to be worth \$87.00 per annum, what is the value of a thirty-second starting surge of 600 horse-power? [803]

Cross-interrogatory No. 20:

Assuming ordinary stoppages at a mining plant and the lightening of loads at change of shift time and a monthly stoppage of three to four hours per month in using a current of 300 horse-power, would not these stoppages ordinarily more than compensate for starting surges of thirty seconds occurring from four or five times during a month?

Cross-interrogatory No. 21:

Where the beneficial use of 300 horse-power is contemplated by the parties to a contract and synchronous motors are not contemplated but the ordinary type of motor is contemplated and in actual use, is it possible to obtain the uninterrupted and beneficial use of 300 horse-power without taking a starting surge of more than 300 horse-power?

Cross-interrogatory No. 22:

If the beneficial and uninterrupted use of 300 real horse-power is contemplated by the parties and ordinary types of induction motor are in use as contem-

plated, can such use be obtained with an instantaneous circuit-breaker set at 56 amperes with a voltage of 2300 volts? [804]

Cross-interrogatory No. 23:

You have answered the direct interrogatories propounded by the defendants in this case. Is it not a fact that all of these answers are based upon the assumption of making available 300 apparent horsepower as distinguished from 300 real horsepower?

Cross-interrogatory No. 24:

If you answer the last question in the negative, point out how many and what of your answers, giving the number of the same, contemplate the use of real as distinguished from apparent power, assuming that the parties to the contract contemplated the use of induction motors of ordinary type and not the use of synchronous motors.

Cross-interrogatory No. 25:

Assuming that the direct interrogatories in this action, Nos. 5 to 32, inclusive, call upon you to answer in terms of real instead of apparent power and under ordinary conditions with reference to the use of induction motors, it being assumed that the use of induction motors of the ordinary type was contemplated by the parties, answer each one of the questions in terms of real power under the assumption that the parties contemplated the use of induction motors of the ordinary type.

SHACKLEFORD & BAYLESS,  
Z. R. CHENEY,

Attorneys for Plaintiff. [805]

THIS INDENTURE AND AGREEMENT made and entered into this 14th day of October, 1909, by and between Oxford Mining Company hereinafter called the lessor and The Alaska Treadwell Gold Mining Company, the Alaska Mexican Gold Mining Company and the Alaska United Gold Mining Company hereinafter called the P. J. K. lessees.

N. P. WITNESSETH, First, the lessor has this date and does by these presents lease unto the lessees all of the following described real property situated on and near Sheep Creek in the Harris Mining District, District of Alaska, to-wit:

The Mexico Mill-site U. S. Mineral Entry No. 25, lot 71 B. The Belvedere Mill-site U. S. Mineral Entry No. 25, lot 72 B. The Jumbo Mill-site U. S. Mineral Entry No. 60, lot No. 260. Also that certain piece or parcel of land beginning at a stake identical with post No. 2 Jumbo Mill-site U. S. Survey No. 260 on the meander line of Gastineau Channel; thence first course along the meander line of Gastineau Channel at ordinary high water P. J. K. mark N. 52° 00' W. 54 feet to stake No. 2; N. P. thence second course N. 48 15' E. 200 feet to stake No. 3; thence S. 52. 00' E. 54 feet to the N. W. side line of Jumbo Mill-site U. S. Survey No. 260, 200 feet to stake No. 1, the place of beginning containing an area of one-quarter of an acre more or less, courses expressed from the true meridian, Mag. Var. 29.30'; and also that certain water right known as the Sheep Creek Water Right and located on Sheep Creek about three-quarters of a

mile from its mouth, together with the flume and pipe-line connecting the same with the beach near the mill at the mouth of the said Sheep Creek, also the saw-mill, boarding house, lumber sheds, wharf landing, mill dam, flumes, penstocks, water-wheels, and all other machinery and appliances used in connection with said saw-mill, situated near the mouth of said Sheep Creek, together with all machinery, tools, equipment, plants of every kind and description now upon said property for a term of ten (10) years from the date hereof at a monthly rental of One Hundred and Twenty-five (\$125.00) Dollars per month; payable in gold coin of the United States on

the first day of each month during the term

P. J. K. of said lease at the office of the lessees at

N. P. Treadwell, Alaska; and it is hereby agreed,

that if any rent shall be due and unpaid, or if default shall be made in any of the covenants herein contained, that it shall be lawful for the lessor

to re-enter said premises and remove all

P. J. K. persons therefrom, and the lessees do

N. P. hereby covenant, promise and agree to pay the lessor the said rent in the manner

hereinbefore specified, and not to let or underlet the whole or any part of said premises without a written consent of the lessor, nor to assign this lease or any part thereof without said written consent, and at the expiration of said term the party of the second part will quit and surrender said premises in as good state and condition as the same now are.

P. J. K. It is the intention of the lessees to erect,

N. P. equip and maintain upon said premises a

water power plant of substantial size and efficiency for the generation of electric power, and if at any times after Two (2) years from the date hereof the lessor or its assigns shall elect to take a current of not to exceed three hundred (300) electric horse-power which shall be taken from and at the generating plant to be installed upon the leased premises hereinbefore described, the lessees undertake, covenant and agree to deliver said current to the lessor or its assigns upon the execution and delivery by the lessor or its assigns to the lessee of a deed or

deeds conveying said leased property herein described to the parties of the second  
 P. J. K. in described to the parties of the second  
 N. P. part. If prior to the expiration of nine years from the date hereof the lessor does not elect to convey to lessees or their [806]

P. J. K. assigns the property herein leased and accept in full consideration therefor the  
 N. P. right to the use of the three-hundred (300) electric horse-power hereinbefore mentioned, the lessees may at their option prior to the expiration of the ten (10) years provided in this lease purchase the property herein leased absolutely from the lessor by paying to the lessor the sum of Twenty-five Thousand Dollars (\$25,000) in gold coin of the United States; and the lessor covenants and agrees upon tender of said sum of Twenty-five Thousand Dollars (\$25,000) to execute and deliver such deeds of conveyance to the property herein leased as hereinbefore specified, excepting only as to the title to (1) the one-quarter acre tract hereinbefore described and (2) the premises occupied and used by the existing wharf



of the lessor to both of which the lessor now asserts only possessory titles. The lessees may at their own cost and expense undertake to perfect the said titles and should lessee wish so to do the lessor shall lend all proper assistance in its power including the using of its name, and should the said titles be so perfected

to the said premises or either of them, they  
P. J. K. shall become the property of the lessor and  
N. P. remain covered by this lease and subject to all the terms and conditions thereof.

The covenants herein contained shall be construed as running with the land and as a charge thereon, so that any successor or successors in interest

P. J. K. to the lessor and or to the said land shall

N. P. be bound by this conveyance in the same manner as if they had executed this agreement; and the lessees hereof may require at their option that the property herein described by conveyed by the lessor to a responsible Trustee for the purpose of carrying out the terms of this agreement, or that deeds and conveyances covering the property herein leased be placed in escrow so as to insure delivery of the same if required under the provisions of any of the covenants of this lease.

P. J. K. If neither of the options herein provided

N. P. for are accepted by either the lessor or the lessees then the property and rights herein described with all the improvements that are or that may be hereafter placed on the said premises shall be and become the property of the lessor.

The provisions herein as to the delivery of three hundred (300) horse-power at the generating plant

to be installed on the premises herein described contemplates the delivery of an uninterrupted current, but the lessees shall not be liable for damages that may arise from operating and physical causes beyond its control.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands and seals the day and year first above written. Executed in triplicate.

Witness:

HAROLD LAWRENCE.

WALTER W. BLACK.

OXFORD MINING COMPANY,

WALLACE HACKETT,

President.

And HENRY ENDICOTT,

Treasurer.

ALASKA TREADWELL GOLD MINING  
COMPANY,

By H. H. TAYLOR,

President.

F. A. HAMMERSMITH,

Secretary.

ALASKA MEXICAN GOLD MINING  
CO.

By H. H. TAYLOR,

President.

F. A. HAMMERSMITH,

Secretary.

ALASKA UNITED GOLD MINING CO.

By H. H. TAYLOR,

President.

F. A. HAMMERSMITH,

Secretary. [807]

State of California,  
City and County of San Francisco,—ss.

On this 12th day of November in the year One Thousand Nine Hundred and Nine, before me, F. J. Kennedy, a Notary Public, in and for said City and County, residing therein, duly commissioned and sworn, personally appeared H. H. Taylor, and F. A. Hammersmith known to me to be the President and Secretary respectively of Alaska Mexican Gold Mining Company and Alaska United Gold Mining Co., the corporations that executed the within and foregoing instrument, and to be the officers who executed the said instrument on behalf of said Corporations therein named, and they acknowledged to me that such Corporations executed the same.

In Witness Whereof, I have hereunto set my hand and affixed my official seal, at my office, in the said City and County of San Francisco, the day and year last above written.

[Seal] P. J. KENNEDY,  
Notary Public in and for the City and County of San Francisco, State of California.

State of California,  
City and County of San Francisco,—ss.

On this 12th day of November in the year One Thousand Nine Hundred and Nine, before me, P. J. Kennedy, a Notary Public, in and for said City and County, residing therein, duly commissioned and sworn, personally appeared H. H. Taylor and F. A. Hammersmith known to me to be the President and Secretary respectively of Alaska Treadwell Gold

Mining Co., the Corporation that executed the within and foregoing instrument, and to be the officers who executed the said instrument on behalf of said Corporation therein named, and they acknowledged to me that such Corporation executed the same.

In Witness Whereof, I have hereunto set my hand and affixed my official seal, at my office, in the said City and County of San Francisco, the day and year last above written.

[Seal]

P. J. KENNEDY,

Notary Public in and for the City and County of San Francisco, State of California.

COMMONWEALTH OF MASSACHUSETTS,  
COUNTY OF SUFFOLK,  
CITY OF BOSTON,—ss.

Be it remembered, that on this 14th day of October, 1909, before me, the undersigned, a Notary Public in and for said County and State, personally appeared Wallace Hackett, President, and Henry Endicott, Treasurer, of the Oxford Mining Company, a Corporation organized under the laws of the State of Maine, to me known to be the individuals described in and who executed the foregoing instrument as such president and Treasurer; and said Henry Endicott having affixed the seal of said Corporation to said instrument, they severally acknowledged to me that he, Wallace Hackett, as President, and he, Henry Endicott, as Treasurer of said Corporation, executed the foregoing instrument for and on behalf of said Corporation as the free and voluntary act of said corporation for the uses and purposes therein set forth. Then the said Henry Endi-

cott, being by me first duly sworn on his oath states that he is the Treasurer of said Corporation, is acquainted and is the custodian, and has in his possession the corporate seal of said Corporation, and that the seal hereinbefore affixed in the corporate seal of said Corporation, and was affixed by him as such Treasurer by order of the Board of Directors of said Corporation.

In Witness Whereof, I have hereunto set my hand and seal the day and year first above written.

[Seal]

LLOYD A. FROST,  
Notary Public.

My commission expires Dec. 5th, 1913. [808]

*In the District Court for the Territory of Alaska,  
Division No. 1, at Juneau.*

Case No. 968—A.

ALASKA GASTINEAU MINING COMPANY  
(a Corporation),

Plaintiff,

vs.

ALASKA TREADWELL GOLD MINING COM-  
PANY (a Corporation), ALASKA UNITED  
GOLD MINING COMPANY (a Corpora-  
tion), ALASKA MEXICAN GOLD MIN-  
ING COMPANY (a Corporation), and  
ROBERT A. KINZIE,

Defendants.

**Deposition of A. M. Hunt [for Defendants].**

BE IT REMEMBERED that pursuant to the stipulation of Counsel for the respective parties in the above-entitled action attached hereto, together



(Deposition of A. M. Hunt.)

with the interrogatories, both direct and cross, also attached hereto, on the 19th day of February, 1913, in the City and County of San Francisco, State of California, before me, P. J. Kennedy, a Notary Public in and for the City and County of San Francisco, State of California, personally appeared A. M. Hunt, a witness produced on behalf of the defendants in the above-entitled action, now pending in said Court, who being by me first duly sworn to testify to the truth, the whole truth, and nothing but the truth in said cause, and to whom I propounded said interrogatories, both direct and cross, testified as follows: [809]

Answer to Direct Interrogatory No. 1:

My name is A. M. Hunt. I reside in Berkeley, Cal.

Answer to Direct Interrogatory No. 2:

Consulting Engineer; Electrical, Mechanical and Civil.

Answer to Direct Interrogatory No. 3:

I am a graduate of the U. S. Naval Academy in the Engineering Class of 1879, at which school I received instruction in electricity. I remained in the U. S. Naval Service until 1894, during which period I performed various duties, some of them connected with electrical plants on vessels of the Navy. I resigned from the service in 1894, and since that date have been engaged in the practice of my profession as a Consulting Engineer. My work has been largely electrical, and in connection with hydro-electric developments. I was retained in 1895 by the Los Angeles Railway Co. to reorganize its system. Old

(Deposition of A. M. Hunt.)

cable lines were electrified and power station rebuilt.

I have been connected with the design and installation of hydro-electric plants for the following companies: The Nevada County Electric Power Co., the Yuba Electric Power Co., the British Columbia Electric Railway Co., the Truckee River Electric Co., the American River Electric Co., and others.

In 1899, I installed a large steam-driven electric power plant for the Independent Electric Light & Power Co. for general service in San Francisco, of a capacity of about 8,000 kilowatts, and acted as General Manager of it for four years. I have designed and supervised a number of smaller electric plants, both steam-driven and water power. I have made numerous reports and investigations in electrical matters. [810]

Answer to Direct Interrogatory No. 4:

I am an independent consulting engineer, and for several years have confined my work almost exclusively to office work and investigation and report on various engineering propositions.

Answer to Direct Interrogatory No. 5:

I do.

Answer to Direct Interrogatory No. 6:

A current by the use of which energy at the rate of 300 horse-power can be produced. It is not any current which may be required to produce 300 horse-power no matter what type of apparatus is used to transform the electric current into some other form of energy, but specifically that current which inherently contains electric energy equivalent to 300

(Deposition of A. M. Hunt.)

horse-power, and which can be transformed into an equivalent amount of energy of some other form.

It is a fact that if the current is employed to produce energy in the form of mechanical work by the use of certain types of electric motors, less than an equivalent amount of energy will be produced, but it is also a fact that commercial motors are available, by the use of which the full equivalent of mechanical energy can be produced.

Answer to Direct Interrogatory No. 7:

The watt.

Answer to Direct Interrogatory No. 8:

A watt is the amount of power represented by an electric current when the product of the instantaneous values of pressure and current as expressed in volts and amperes is unity. The terms volts and amperes are the units expressing the pressure [811] and quantity flow in the case of an electric current.

Answer to Direct Interrogatory No. 9:

The product of the amperes by the volts times 1.73, provided that there is no displacement of current and voltage relationship by conditions of the load. If there is such displacement, multiply the above result by the power factor expressed as a decimal.

Answer to Direct Interrogatory No. 10:

746.

Answer to Direct Interrogatory No. 11:

If the expression is to be determinative, some power factor must be understood. I should assume it to be unity or 100 per cent power factor, if not stated. I base this assumption on Rule 74a of the

(Deposition of A. M. Hunt.)

Standardization Rules of the American Institute of Electrical Engineers, approved June 27, 1911, and reading as follows:—

“74a. Power Factor. Since the inherent capacity of alternating current generators, synchronous motors and transformers, depends upon their voltage and their current, they should be rated in kilovolt-amperes. If the apparatus is rated in kilowatts without specification as to the power factor, a power factor of 100 per cent shall be understood.

If rated in kilowatts and a power factor other than 100 per cent be specified, this should be understood as defining only the nature of the load, and not as implying an increase in the ampere rating of the apparatus, which should be based upon the kilowatt rating at 100 per cent power factor,” by which rule I would be guided in my operations.

Prior to the date of approval of the rules from which the above citation is taken, the corresponding rule approved June 21, 1907, read as follows:—

“74a. Power Factor. Alternating current apparatus should be rated in kilowatts, at 100 per cent power-factor, i. e., with current in phase with terminal voltage, unless a phase displacement is inherent in the apparatus or is specified. If a power-factor other than 100 per cent is specified, the rating should be expressed in kilovolt-amperes and power factor, at rated load.”

(Deposition of A. M. Hunt.)

Answer to Direct Interrogatory No. 12:

In accordance with the rule stated in answer to the previous question, I understand the power factor to be 100 per cent.

Answer to Direct Interrogatory No. 13-14:

Neither of these interrogatories can be answered categorically, but both are covered by the following reply:

The power factor of a current supply is a function of the load or apparatus which utilizes the current, and not of that which supplies it. Consequently, the generating apparatus has no part or function in determining the power factor. The generating apparatus has conditions as to power factor imposed on it, over which it has no control. Hence if all matters connected with the manner of use and type of motor and control are left entirely to the party to whom the power is furnished, the party furnishing the current has no way of determining what the current demand will be, except by assuming a power factor, and I should consider that 100 per cent was implied, basing my assumption on Rule 74a, previously reported.

Answer to Direct Interrogatory No. 15:

Under the conditions noted, I would use an ammeter, preferably one producing a continuous visible record.

Answer to Direct Interrogatory No. 16:

Yes.

Answer to Direct Interrogatory No. 17:

A wattmeter would not be the proper device to



(Deposition of A. M. Hunt.)

measure a current corresponding to 300 electric horse-power.

Answer to Direct Interrogatory No. 18:

No. [813]

Answer to Direct Interrogatory No. 19:

It varies.

Answer to Direct Interrogatory No. 20:

Yes.

Answer to Direct Interrogatory No. 21:

Yes.

Answer to Direct Interrogatory No. 22:

Yes.

Answer to Direct Interrogatory No. 23:

Yes, with some types of lamps.

Answer to Direct Interrogatory No. 24:

It is not possible to give a categorical answer to this question.

It does not specify the type nor design of motor, nor whether it is to be started idle or under load. The amount of current which will be required is a function of type and design, the rapidity with which motor must be brought up to speed, the type and design of starting devices, whether the motor is to be started and brought up to speed without load or with load, and if without load whether load is gradually or suddenly applied.

According to the conditions implied, it may require more or less current to start a motor than it does to operate it at load.

Answer to Direct Interrogatory No. 25:

For the same reasons as stated in my reply to No.

(Deposition of A. M. Hunt.)

24, I cannot answer this question.

Answer to Direct Interrogatory No. 26:

For the same reasons as stated in my reply No. 24,  
[814] I cannot answer this question.

Answer to Direct Interrogatory No. 27:

If the motor is of such a type and design, and is so started as to require a current of greater than 300 horse-power at starting, and if a time relay circuit-breaker is interposed in the line, which breaker is set to permit the normal flow of a current of 300 horse-power, the breaker will permit the flow of a current of greater than 300 horse-power during the time period for which the breaker is adjusted.

Answer to Direct Interrogatory No. 28:

Yes.

Answer to Direct Interrogatory No. 29:

None that I know of.

Answer to Direct Interrogatory No. 30:

In my opinion, based on my observation and experience, the instantaneous type is in more general use than the time relay type.

Answer to Direct Interrogatory No. 31:

In my opinion, based on my observation and experience, yes.

Answer to Direct Interrogatory No. 32:

I consider it the proper device to use, because during the time period for which a time relay breaker is adjusted to remain closed, the apparatus which it is designed to protect may be subjected to serious and dangerous overloads. A circuit-breaker is also intended to serve another purpose than that of pro-

(Deposition of A. M. Hunt.)

tecting the supply apparatus from injury. Overloads thrown on supply apparatus tend to disorganize and disturb the service [815] rendered to other devices connected to the same source of supply, to such an extent as to be seriously detrimental, and a time relay circuit-breaker will permit such overloads, while an instantaneous circuit-breaker will prevent them.

Answer to Cross-interrogatory No. 1:

No, except that I have been requested by Mr. Bradley to give this deposition.

Answer to Cross-interrogatory No. 2:

I have read the copy of the contract as requested.

Answer to Cross-interrogatory No. 3:

Yes, for smaller sizes.

Answer to Cross-interrogatory No. 4:

In one of the substations of the Pacific Gas & Electric Co., in Oakland, Cal.

Answer to Cross-interrogatory No. 5:

Not necessarily.

Answer to Cross-interrogatory No. 6:

On circuits carrying in addition to induction motors other motors of the synchronous type.

Answer to Cross-interrogatory No. 7:

The question is illy worded, as horse-power is not measured upon an electric current. Assuming that the intent of the question is as to what is the ordinary instrument used for measuring the horse-power being translated in an electric current, where it is the intention of the producer to sell and the consumer to purchase real as distinguished from apparent

(Deposition of A. M. Hunt.)

[816] power, I answer a wattmeter.

Answer to Cross-interrogatory No. 8:

The accepted definition of "power factor" is that given in the Standardization Rules of the American Institute of Electrical Engineers, approved on June 27, 1911, which reads as follows:—

"The Power Factor in alternating-current circuits or apparatus is the ratio of the effective (i. e., the cyclic average) power in watts to the apparent power in volt-amperes. It may be expressed as follows:

$$\frac{\text{effective power}}{\text{apparent power}} = \frac{\text{effective watts}}{\text{total volt-amperes}} = \frac{\text{effective current}}{\text{total current}} = \frac{\text{effective voltage}}{\text{total voltage}}$$

P.  
J. K.  
N. P.  
M. H.

Answer to Cross-interrogatory No. 9:

Under the assumption stated, and with the further assumption that the contract contained no other provision affecting this phase of the situation, I would use a wattmeter to measure the power, but as the readings of the ammeter would vary widely, although the wattmeter showed 300 real horse-power, depending upon the power factor, which is a varying factor, a number of different sittings of the circuit-breaker would fill the requirements stated in the question.

Answer to Cross-interrogatory No. 10:

Not so reasonable as to suppose that it would be used for mixed purposes, including or not including the operation of induction motors.

Answer to Cross-interrogatory No. 11:

There is nothing in my negative reply to No. 10 which implies that I assume that synchronous mo-

(Deposition of A. M. Hunt.)

tors are commonly used in mining operations upon loads of 300 horse-power or less.

I base my negative answer to No. 10 on the following [817] facts. In my past experience, in advising on power contracts between mining companies and electric power companies, I have on several occasions encountered provisions in the contracts which required the company purchasing the power, to so take and utilize it as to maintain a power factor within certain specified limits, approximately 100%. The purchasing party was left free as to the type of motor to be used, and had to adopt his own means of controlling the power factor.

Answer to Cross-interrogatory No. 12:

The question is illy worded, as motors are not used upon a current. Assuming the intent to be that the induction motor is to be connected to the circuit carrying the current mentioned, I would answer as follows:

The benefit and use of 300 horse-power cannot in such case be secured under the conditions named in Direct Interrogatory No. 16, provided the induction motor is the only device connected to the circuit, and that the electric capacity of the circuit is low. It is, however, possible to use devices connected to the circuit which will under the conditions of direct interrogatory No. 16 permit the benefit and use of 300 horse-power to be secured, even when an induction motor is used. Such devices are used and are commercially manufactured and sold, and are known as rotary condensers.



(Deposition of A. M. Hunt.)

Whether the wattmeter would under the conditions indicate 300 horse-power or less would depend on whether the induction motor were used alone upon the circuit or were used in connection with such a power factor correction device as I have spoken of.  
Answer to Cross-interrogatory No. 13:

Approximately 80.3 amperes. [818]

Answer to Cross-interrogatory No. 14:

The circuit-breaker should remain as stated if it is the intention at all times to be in readiness to deliver up to 300 horse-power at 70% power factor.

Answer to Cross-interrogatory No. 15:

If the induction motor of the usual types is used the power factor will be lower at fractional loads than at full load.

To the second part of the question, I answer no.

Answer to Cross-interrogatory No. 16:

I mean that they are in use in various parts of the country and for varied uses.

Answer to Cross-interrogatory No. 17:

The specific number of instances within my knowledge of the use of synchronous motors of 300 horse-power or less is very limited, and probably does not exceed twelve. I do not know how many induction motors of corresponding sizes are in use, but is vastly in excess of twelve.

Induction motors are used in smaller sizes because they cost less than synchronous motors and require less attention in operation, and are more easily started.

Answer to Cross-interrogatory No. 18:

My answer to Direct Interrogatory may be con-

(Deposition of A. M. Hunt.)

strued as a negative one, so I answer this question.

A motor requiring 300 horse-power to operate can be started from a plant with sufficient water-power available to generate 300 horse-power, if the motor is of a reasonable type and design, and does not have to be accelerated too rapidly, and under too much load, and if starting devices are of reasonable [819] type and design. Further, if the motor is of a type and design which modifies the power factor of the current supplied, so that it is less than 100%, the water-power plant must be provided with generating and other electrical apparatus of sufficient capacity in excess of a rating of 300 horse-power, as defined in Standardization Rule No. 74a, quoted in my answer to Direct Interrogatory No. 11, to carry the increased electric current imposed on the plant by the modified power factor.

Answer to Cross-interrogatory No. 19:

Assuming the intent of the question to be to state that one horse-power is worth \$87.00 per annum, my answer is:

If by "a thirty second starting surge of 600 horse-power" is meant that starting from any stated horse-power, this is increased instantly by 600 horse-power, which increased load continues for 30 seconds, and then drops instantly to the stated amount, the amount of work performed by the 600 horse-power of energy acting for the thirty seconds is equivalent to approximately .00057 of a horse-power year; .00057 of a horse-power year at \$87.00 per horse-power year is 5.959 cents. However, this is

(Deposition of A. M. Hunt.)

not a measure of the value of such a surge.

The amount of such a surge in relation to capacity of plant may be such as to require an investment in electrical apparatus, greater than the total investment for such apparatus for handling 300 horsepower without such surges.

Answer to Cross-interrogatory No. 20:

The lightening of load and stoppages as assumed in the question would presumably tend to reduce the average rate of power use as much or more than four or five surges per month would increase it, but I should not consider them as compensating one for the other. Such surges do have a very serious [820] effect upon the operation of a generating plant, especially when the ratio of the amount of such surges to the plant capacity is considerable, and the operation of other connected load may be seriously interfered with under such conditions. Such interference may be so serious as to make the remaining power which the plant is capable of producing absolutely unfit for some uses.

Answer to Cross-interrogatory No. 21:

Yes, if motors are started without load and with starting devices designed for this purpose, and load is gradually applied.

Answer to Cross-interrogatory No. 22:

Yes, if power factor corrective devices are used which will adjust power-factor to 100%.

Answer to Cross-interrogatory No. 23:

It is not. My answers are based on neither of the assumptions stated in the question, but upon mak-

(Deposition of A. M. Hunt.)

ing available a current of 300 electric horse-power.

Answer to Cross-interrogatory No. 24.

There is nothing in my negative answer to Cross-interrogatory No. 23 which justifies the implications contained in this question.

My answer to Direct Interrogatory Nos. 13 and 14 points out that power factor of the current supplied is not under the control of the generating apparatus, but is a function of the manner in which the current is used. If used in such a way that the relation between the waves of pressure and rate of flow is displaced, it will require more current to produce 300 mechanical horse-power than if the current is used so as to [821] permit this relation to remain normal. Apparent power is based on this normal relationship, and a reference to Rule 74a, quoted in my answer to Direct Interrogatory No. 11, shows that it is used as the basis for rating the capacity of electric generators.

A current of 300 electric horse-power may have the relation, previously referred to displaced to such an extent by methods of use as to produce mechanical power of very much less than 300 horse-power. Answer to Cross-interrogatory No. 25:

It is not possible for me to read the assumptions given in this question into the Direct Interrogatories, as requested. They have no bearing on some of the questions, and render others contradictory.

A. M. HUNT.

Subscribed and sworn to before me this 20th day of February, A. D. 1913.

[Seal]

P. J. KENNEDY,

Notary Public in and for the City and County of San Francisco, State of California. [822]

State of California,

City and County of San Francisco,—ss.

I, P. J. Kennedy, a duly appointed, qualified and acting Notary Public in and for the City and County of San Francisco, State of California, do hereby certify that the witness in the foregoing deposition named, A. M. Hunt, was by me first duly sworn to testify to the truth, the whole truth, and nothing but the truth; that thereupon his foregoing deposition was taken by me in the City and County of San Francisco, State of California, on the 19th day of February, 1913, at the hour of two o'clock P. M. of said day, and thereafter until completed; that I propounded said direct interrogatories and cross-interrogatories to said witness; that said witness answered said interrogatories, both direct and cross, and his answers are fully set forth in the transcript of said deposition attached hereto. I further certify that Estelle Starstrand, a disinterested person, was appointed by me to act as shorthand reporter to take the testimony of said witness in shorthand, and thereafter reduce the same to longhand typewriting, and was by me first duly sworn for that purpose. That said answers of said witness A. M. Hunt to said direct and cross-interrogatories were reduced to longhand typewriting by said Estelle Starstrand, and when completed as herein set forth, were care-



fully read by said witness, and after being corrected by him in every particular desired, were by him subscribed in my presence. That I thereupon wrapped and sealed the said deposition, and directed it to the Clerk of the District Court of the Territory of Alaska, Division No. 1, at Juneau, in which Court said action is pending, in the manner and pursuant to the terms of the stipulation of respective counsel for the respective parties attached hereto.

WITNESS my hand this 20th day of February, A. D. 1913.

[Seal]

P. J. KENNEDY,

Notary Public in and for the City and County of San Francisco, State of California. [823]

And the defendants to further maintain the issues on their part offered in evidence the deposition of C. E. Heise, the witness whose testimony was taken by deposition in the City of San Francisco and upon the stipulation attached to said deposition, and who testified on oath as narrated in said deposition, which said deposition of said C. E. Heise so taken was received and read in evidence and the testimony of the said C. E. Heise so given by deposition and received in evidence in this cause is as follows:

*In the District Court for the Territory of Alaska,  
Division No. 1, at Juneau.*

Case No. 968—A.

ALASKA GASTINEAU MINING COMPANY,  
Plaintiff,

vs.

ALASKA TREADWELL GOLD MINING COM-  
PANY, a Corporation, ALASKA UNITED  
GOLD MINING COMPANY, a Corporation,  
ALASKA MEXICAN GOLD MINING COM-  
PANY, a Corporation, and ROBERT A. KIN-  
ZIE,

Defendants.

**Stipulation.**

It is hereby stipulated that the deposition of C. E. Heise may be taken in response to the hereunto attached interrogatories, both direct and cross, and that such deposition may be taken before P. J. Kennedy, a notary public in and for the State of California, or before Grant H. Smith, a notary public for State of California, or before any other notary public without commission from the court; and when the deposition shall have been so taken it shall be returned by such notary, to the Clerk of the District Court, at Juneau, Alaska, as provided by law, and may be read in evidence on the trial in this case, subject to such objections as might be made if the witness were personally present and testifying orally except that all objections as to the form of the

question are hereby waived. Dated this 30th day of January, 1913.

SHACKLEFORD & BAYLESS,  
Z. R. CHENEY,

Attorneys for Plaintiff.

HELLENTHAL & HELLENTHAL,

Attorneys for Defendants. [824]

*In the District Court for the Territory of Alaska,  
Division No. 1, at Juneau.*

Case No. 968—A.

ALASKA GASTINEAU MINING COMPANY,  
a Corporation,

Plaintiff,

vs.

ALASKA TREADWELL GOLD MINING COM-  
PANY, a Corporation, ALASKA UNITED  
GOLD MINING COMPANY, a Corporation,  
ALASKA MEXICAN GOLD MINING  
COMPANY, a Corporation, and ROBERT A.  
KINZIE,

Defendants.

**Interrogatories to be Propounded to C. E. Heise.**

Interrogatory No. 1:

State your name, where do you reside?

Interrogatory No. 2:

What is your profession? State your calling.

Interrogatory No. 3:

If you state that you by profession an electrical engineer, you may state fully at what school or schools you were educated as such electrical engineer, and

what experience you have had as an electrical engineer. State in detail.

Interrogatory No. 4:

What is your present occupation and position, what duties do you perform in connection with the position occupied by you?

Interrogatory No. 5:

Do you know what constitutes a current of electricity of not to exceed 300 electric horse-power?

Interrogatory No. 6:

If you answer the preceding question by stating that you do know what constitutes a current of not to exceed 300 electric [825] horse-power, you may state of what such a current consists, stating your views fully and in detail upon this question.

Interrogatory No. 7:

What is the unit of electric power?

Interrogatory No. 8:

If you answer the preceding interrogatory by stating that a watt is the unit of electrical power, you may state what constitutes a watt.

Interrogatory No. 9:

The amperes and voltage of a three phase current being known, how do you determine the number of watts?

Interrogatory No. 10:

How many watts constitute an electric horse-power?

Interrogatory No. 11:

Where a current of not to exceed a given amount of horse-power is spoken of and no mention is made of a power factor, what, if any, power factor is neces-

sarily understood?

Interrogatory No. 12:

In a case where it is sought to make a current of not to exceed 300 horse-power available for the use of another, and nothing is said as to the use of which said power was to be applied, or the type of motors or other apparatus to be installed, or the manner or place of use, what power factor is understood, if any?

Interrogatory No. 13:

Where the place and manner of use is not specified, and the question of what type of motor, the place of use, the manner of installing the motor, and other matters [826] in connection with the operation of the motor, are left entirely in the control of the person to whom the power is furnished, and no particular power factor is mentioned or referred to, is it possible to supply any particular power factor, as the power factor understood by the parties except unity power factor?

Interrogatory No. 14:

If you answer the preceding interrogatory by stating that it is not possible to supply or imply any power factor under the circumstances mentioned, except unity power factor, you may state your reasons why.

Interrogatory No. 15:

Where the current sought to be made available by a power company for the use of another is a current of not to exceed 300 electric horse-power to be taken from and at the generating plant, and no mention is made of a power factor, and neither the type or form of water to be used is specified or referred to, nor



the place of use, the manner in which it is to be installed, how would you proceed to measure such a current, and what apparatus would you employ for that purpose in a case where the voltage is kept constant by means of a Tirril regulator?

Interrogatory No. 16:

Where an automatic instantaneous circuit-breaker is set so as to go out at about 60 amperes on a three phase current with a voltage of 2300 impressed would such apparatus permit the uninterrupted flow [827] of a current of not to exceed 300 horsepower?

Interrogatory No. 17:

Where a current of not to exceed 300 electric horsepower is sought to be made available for the use of another, the current to be taken from and at the generating plant and no mention is made of a power factor, nothing being said concerning the type of motor, or other apparatus to be installed, or about the use to which the power is to be applied, as well as the type of motor used and the place of use, the manner of installing the motor, all being matters left to the control of the party to whom the power is furnished, could such a current be measured by means of a watt meter which automatically takes in consideration the power factor?

Interrogatory No. 18:

You may state whether the power factor of the various types of motors in use *in* the same.

Interrogatory No. 19:

You may state whether the power factor of a motor in use is constant, or whether the same varies depend-

ing upon the condition of the load and other matters in connection with the operations carried on.

Interrogatory No. 20:

Can a synchronous motor be so adjusted and used so as to operate at unity power factor? [828]

Interrogatory No. 21:

Are synchronous motors in general use?

Interrogatory No. 22:

Can 300 electric horse-power be developed by means of a synchronous motor from a three phase current of about 56 amperes with a voltage of 2300 impressed?

Interrogatory No. 23:

At the generating plant will such a current furnish 300 horse-power for lighting purposes?

Interrogatory No. 24:

Can a motor requiring a current of 300 horse-power to operate be started with a current of 300 horse-power?

Interrogatory No. 25:

If you answer the preceding interrogatory by stating that such a motor cannot be started with the same amount of power that it requires to operate it, how much more power approximately does it require to start a simple squirrel cage motor of the induction type than it does to operate such motor?

Interrogatory No. 26:

What is the difference between the starting current and the running current of the various forms of induction motors?

Interrogatory No. 27:

If a time relay circuit-breaker were installed on

the transmission line of a motor requiring 300 horse-power to operate and such motor were operated by a current flowing over such line and the circuit-breaker being set to permit the flow of such current and such motor were brought to a [829] state of rest and were afterwards started and placed in operation would the current drawn at the time such motor was started be of greater horse-power than the current drawn when such motor was in continuous operation, the voltage being kept constant?

Interrogatory No. 28:

Would not a time relay circuit-breaker set so as to permit the flow of a current of 300 horse-power permit the taking of a current of greater horse-power for short periods of time?

Interrogatory No. 29:

Is there any other practical device by which the uninterrupted flow of a current could be limited to any given limit at all times except by means of an instantaneous circuit-breaker?

Interrogatory No. 30:

Where a current sought to be furnished or to be made available is to be a current of not to exceed a given electric horse-power, which, if any form of circuit-breaker is in general use, the instantaneous circuit-breaker or the time relay circuit-breaker?

Interrogatory No. 31:

If you answer the preceding interrogatory by stating that the instantaneous circuit-breaker is the form in general use, you may state whether it is the proper appliance to be used for such purpose. [830]

Interrogatory No. 32:

If you answer the preceding interrogatory by stating that the instantaneous circuit-breaker is the proper appliance under the facts stated<sup>d</sup> in the two preceding interrogatories, you may state why the use of such instantaneous circuit-breaker is proper.  
[831]

*In the District Court for the District of Alaska,  
Division No. 1 at Juneau.*

No. 968—A.

ALASKA GASTINEAU MINING COMPANY,  
a Corporation,

Plaintiff,

vs.

ALASKA TREADWELL GOLD MINING COMPANY, a Corporation, ALASKA UNITED GOLD MINING COMPANY, a Corporation, ALASKA MEXICAN GOLD MINING COMPANY, a Corporation, and ROBERT A. KINZIE,

Defendants.

**Cross-interrogatories to be Propounded to C. L. Corey, W. J. Davis, C. E. Heise, E. A. Quinn, A. M. Hunt and H. C. Parker.**

Cross-interrogatory No. 1:

Are you or have you recently been in the employ of F. W. Bradley or any of his associates or of O. Mills or any of the defendant companies?

Cross-interrogatory No. 2:

Attached to these cross-interrogatories you will find a copy of the contract in dispute in this action

and before answering any of the questions, either direct or cross, please read this contract and bear the same in mind in answering the questions addressed to you.

Cross-interrogatory No. 3:

Is it not a fact that induction motors are used upon three-phase alternating currents by power consumers much more than synchronous motors? [832]

Cross-interrogatory No. 4:

Where have you seen a synchronous motor in use upon a three-phase alternating current for a load of not to exceed 300 horse-power?

Cross-interrogatory No. 5:

Is not the power factor less than unity wherever induction motors are used upon a three-phase alternating current?

Cross-interrogatory No. 6:

If you answer the last cross-interrogatory in the negative, state the conditions under which you have observed a unity power factor in connection with the use of an induction motor of 300 horse-power or less.

Cross-interrogatory No. 7:

What is the ordinary device or instrument for measuring horse-power upon an electric current where it is the intention of the producer to sell and the consumer to purchase real as distinguished from apparent power?

Cross-interrogatory No. 8:

What is the accepted definition of power factor?

Cross-interrogatory No. 9:

Assuming in this case that it was the intention of the parties to deal in real and not apparent power



and that the contract did not require the use of a synchronous motor and that the contract contemplated the use of the power contracted for in mining operations, would you not measure the power by means of a wattmeter and [833] set your circuit-breaker according to the reading of your ammeter and voltmeter at the instant when your wattmeter showed a consumption of 300 real horse-power.

Cross-interrogatory No. 10:

Assuming that it was the intention of the parties to the contract that the 300 horse-power called for therein was to be used in ordinary mining operations, would it not be reasonable to expect that the power would be applied to induction motors?

Cross-interrogatory No. 11:

If you answer the last question in the negative, state what observation and experience you have had with reference to the use of motors in connection with mining which would justify you in assuming that synchronous motors are commonly used in mining operations upon loads of 300 horse-power or less.

Cross-interrogatory No. 12:

If you answer direct interrogatory No. 16 to the effect that the apparatus mentioned in that interrogatory would permit the uninterrupted flow of a current not to exceed 300 horse-power, assume that the motor upon such current is an induction motor of the ordinary type and not a synchronous motor, can the benefit and use of 300 horse-power be secured under the conditions named in interrogatory [834] No. 18, would not a wattmeter indicate under such a setting that less than 300 horse-power was being taken?

## Cross-interrogatory No. 13:

If you answer direct interrogatory No. 19 in the affirmative, that is to the effect that the power factor will vary depending upon the condition of the load and other matters in connection with the operations carried on, assume for the purposes of this question that the contract called for the delivery of real and not apparent power, assume that the power factor is 70 instead of unity and that the voltage is 2300 volts, at what amperage would your circuit-breaker be set so as to permit the use of 300 real horse-power?

## Cross-interrogatory No. 14:

Having answered the last question and assuming that the power factor is 70 when the full load of 300 horse-power is taken and that the power factor has been determined under normal conditions, if these conditions are maintained and not changed, should the circuit-breaker not remain as stated in answer to your last question?

## Cross-interrogatory No. 15:

Assuming the conditions named in the last two cross-interrogatories, is it not a fact that the power [835] factor would decrease if a fractional instead of a full load were used in operating the same machinery? Under such fractional load, however, would you have to change the setting of the circuit-breaker so as to prevent the taking of more than the maximum of real power called for?

## Cross-interrogatory No. 16:

If you answer direct interrogatory No. 21 in the affirmative, state what you mean by synchronous motors being in general use.

Cross-interrogatory No. 17:

If you answer direct interrogatory No. 21 in the affirmative, state specifically the number of instances of synchronous motors of 300 horse-power or less within your own knowledge, that are in use and state also the number of induction motors of 300 horse-power or less that are in general use.

Cross-interrogatory No. 18:

If you answer direct interrogatory No. 24 in the negative, state whether a motor requiring 300 horse-power to operate can be started from a plant with sufficient water-power available to generate 300 horse-power.

Cross-interrogatory No. 19:

Assuming horse-power to be worth \$87.00 per annum, what is the value of a thirty second starting surge of 600 horse-power? [836]

Cross-interrogatory No. 20:

Assuming ordinary stoppages at a mining plant and the lightening of loads at change of shift time and a monthly stoppage of three to four hours per month in using a current of 300 horse-power, would not these stoppages ordinarily more than compensate for starting surges of thirty seconds occurring from for to five times during a month?

Cross-interrogatory No. 21:

Where the beneficial use of 300 horse-power is contemplated by the parties to a contract and synchronous motors are not contemplated but the ordinary type of induction motor is contemplated and in actual use, is it possible to obtain the uninterrupted and beneficial use of 300 horse-power without taking a

starting surge of more than 300 horse-power?

Cross-interrogatory No. 22:

If the beneficial and uninterrupted use of 300 real horse-power is contemplated by the parties and ordinary types of induction motor are in use as contemplated, can such use be obtained with an instantaneous circuit-breaker set at 56 amperes with a voltage of 2300 volts? [837]

Cross-interrogatory No. 23:

You have answered the direct interrogatories propounded by the defendants in this case. Is it not a fact that all of these answers are based upon the assumption of making available 300 apparent horse-power as distinguished from 300 real horse-power?

Cross-interrogatory No. 24:

If you answer the last question in the negative, point out how many and what of your answers, giving the number of the same, contemplated the use of real as distinguished from apparent power, assuming that the party to the contract contemplated the use of induction motors of the ordinary type and not the use of synchronous motors.

Cross-interrogatory No. 25:

Assuming that the direct interrogatories in this action, Nos. 5 to 32, inclusive, call upon you to answer in terms of real instead of apparent power and under ordinary conditions with reference to the use of induction motors, it being assumed that the use of induction motors of the ordinary type was contemplated by the parties, answer each one of the questions in terms of real power, under the assumption that the parties contemplated the use of induction

motors [838] of the ordinary type.

SHACKELFORD & BAYLESS,  
Z. R. CHENEY,

Attorneys for Plaintiff [839]

THIS INDENTURE AND AGREEMENT made and entered into this 14th day of October, 1909, by and between Oxford Mining Company hereinafter called the lessor and The Alaska Treadwell Gold Mining Company, the Alaska Mexican Gold P. J. K. Mining Company and the Alaska United N. P. Gold Mining Company hereinafter called the lessees.

WITNESSETH, First, the lessor has this date and does by these presents lease unto the lessees all of the following described real property situated on and near Sheep Creek in the Harris Mining District, District of Alaska, to-wit:

The Mexico Mill-site U. S. Mineral Entry No. 25, lot 71 B. The Belvedere Mill-site U. S. Mineral Entry No. 25, lot 72 B. The Jumbo Mill-site U. S. Mineral Entry No. 60, lot No. 260. Also that certain piece or parcel of land beginning at a stake identical with post No. 2 Jumbo Mill-site U. S. Survey No. 260 on the meander line of Gastineau Channel; thence first course a long the meander line of Gastineau Channel at ordinary high water mark N. P. J. K. 52° 00' W. 54 feet to stake No. 2; thence N. P. second course N. 48 15' E. 200 feet to stake No. 3; thence S. 52.00' E. 54 feet to the N. W. side line of Jumbo Mill-site U. S. Survey No. 260, 200 feet to stake No. 1, the place of beginning containing an area of one quarter of an acre more or less,



courses expressed from true meridian, Mag. Var. 29.30'; and also that certain water right known as the Sheep Creek Water Right and located on Sheep Creek about three quarters of a mile from its mouth, together with the flume and pipe-line connecting the same with the beach near the mill at the mouth of the said Sheep Creek, also the saw-mill, boarding house, lumber sheds, wharf landing, mill dam, flumes, penstocks, water-wheels, and all other machinery and appliances used in connection with said saw mill, situated near the mouth of said Sheep Creek, together with all machinery, tools, equipment, plants of every kind and description now upon said property for a term of ten (10) years from the date hereof at a monthly rental of One Hundred and Twenty-five (\$125.00) Dollars per month; payable in gold coin of the United States on the first day of each

P. J. K. month during the term of said lease at the  
 N. P. office of the lessees at Treadwell, Alaska;  
 and it is hereby agreed, that if any rent shall be due and unpaid, or if default shall be made in any of the covenants herein contained, that it shall be lawful for the lessor to re-enter said

P. J. K. premises and remove all persons there-  
 N. P. from, and the lessees, do hereby covenant, promise and agree to pay the lessor the said rent in the manner hereinbefore specified, and not to let or underlet the whole or any part of said premises without a written consent of the lessor, nor to assign this lease or any part thereof without said written consent, and at the expiration of said term the party of the second part will quit and surrender

said premises in as good state and condition as the same now are.

P. J. K. It is the intention of the lessees to erect,

N. P. equip and maintain upon said premises a water power plant of substantial size and efficiency for the generation of electric power, and if at any time after Two (2) years from the date hereof the lessor or its assigns shall elect to take a current of not to exceed three hundred (300) electric horse-power which shall be taken from and at the generating plant to be installed upon the leased premises hereinbefore described, the lessees undertake, covenant and agree to deliver said current to the lessor or its assigns upon the execution and delivery by the lessor or its assigns to the lessee of a deed or deeds conveying said leased property herein de-

P. J. K. scribed to the parties of the second part. If

N. P. prior to the expiration of nine years from the date hereof the lessor does not elect to convey to lessees or their [840] assigns

P. J. K. the property herein leased and accept in

N. P. full consideration therefor the right to the use of the three-hundred (300) electric horse-power hereinbefore mentioned, the lessees may at their option prior to the expiration of the ten (10) years provided in this lease purchase the property herein leased absolutely from the lessor by paying to the lessor the sum of Twenty-Five Thousand Dollars (\$25,000.) in gold coin of the United States; and the lessor covenants and agrees upon tender of said sum of Twenty five Thousand Dollars (\$25,000.) to execute and deliver such deeds of conveyance to the

property herein leased as hereinbefore specified, excepting only as to the title to (1) the one quarter acre tract hereinbefore described and (2) the premises occupied and used by the existing wharf of the lessor to both of which the lessor now asserts only possessory titles. The lessees may at their own cost and expense undertake to perfect the said titles and should lessee wish so to do the lessor shall lend all proper assistance in its power including the using of its name, and should the said titles be so perfected to

the said premises or either of them, they  
P. J. K. shall become the property of the lessor and  
N. P. remain covered by this lease and subject  
to all the terms and conditions thereof.

The covenants herein contained shall be construed as running with the land and as a charge thereon, so

that any successor or successors in interest  
P. J. K. to the lessor and or to the said land shall be  
N. P. bound by this conveyance in the same manner as if they had executed this agreement;

and the lessees hereof may require at their option that the property herein described by conveyed by the lessor to a responsible Trustee for the purpose of carrying out the terms of this agreement, or that deeds and conveyances covering the property herein leased be placed in escrow so as to insure delivery of the same if required under the provisions of any of the covenants of this lease.

P. J. K. If neither of the options herein provided  
N. P. for are accepted by either the lessor or the lessees then the property and rights herein described with all the improvements that are or that

may be hereafter placed on the said premises shall be and become the property of the lessor.

The provisions herein as to the delivery of three hundred (300) horse-power at the generating plant to be installed on the premises herein described contemplates the delivery of an uninterrupted current, but the lessees shall not be liable for damages that may arise from operating and physical causes beyond its control.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands and seals the day and year first above written. Executed in triplicate.

Witness:

HAROLD LAWRENCE.

WALTER W. BLACK.

OXFORD MINING COMPANY,

WALLACE HACKETT,

President.

And HENRY ENDICOTT,

Treasurer.

ALASKA TREADWELL GOLD MINING  
COMPANY,

By H. H. TAYLOR,

President.

F. A. HAMMERSMITH,

Secretary.

ALASKA MEXICAN GOLD MINING CO.

By H. H. TAYLOR,

President.

F. A. HAMMERSMITH,

Secretary.

ALASKA UNITED GOLD MINING CO.

By H. H. TAYLOR,

President.

F. A. HAMMERSMITH,

Secretary. [841]

State of California,

City and County of San Francisco,—ss.

On this 12th day of November, in the year One Thousand Nine Hundred and Nine, before me, P. J. Kennedy, a Notary Public, in and for said City and County, residing therein, duly commissioned and sworn, personally appeared H. H. Taylor, and F. A. Hammersmith known to me to be the President and Secretary respectively of Alaska Gold Mining Company and Alaska United Gold Mining Co., the corporations that executed the within and foregoing instrument, and to be the officers who executed the said instrument on behalf of said Corporations therein named, and they acknowledged to me that such Corporations executed the same.

In Witness Whereof, I have hereunto set my hand and affixed my official seal, at my office, in the said City and County of San Francisco, the day and year last above written.

[Seal]

P. J. KENNEDY,

Notary Public in and for the City and County of San Francisco, State of California.

State of California,

City and County of San Francisco,—ss.

On this 12th day of November in the year One Thousand Nine Hundred and Nine, before me, P. J. Kennedy, a Notary Public, in and for said City and



County, residing therein, duly commissioned and sworn, personally appeared H. H. Taylor and F. A. Hammersmith known to me to be the President and Secretary respectively of Alaska Treadwell Gold Mining Co., the Corporation that executed the within and foregoing instrument on behalf of said Corporation therein named, and they acknowledged to me that such Corporation executed the same.

In Witness Whereof, I have hereunto set my hand and affixed my official seal at my office, in the said City and County of San Francisco, the day and year last above written.

[Seal]

F. J. KENNEDY,

Notary Public in and for the City and County of San Francisco, State of California.

Commonwealth of Massachusetts,  
County of Suffolk,  
City of Boston,—ss.

Be it remembered, that on this 14th day of October, 1909, before me, the undersigned, a Notary Public in and for said County and State, personally appeared Wallace Hackett, President, and Henry Endicott, Treasurer, of the Oxford Mining Company, a Corporation organized under the laws of the State of Maine, to me known to be the individuals described in and who executed the foregoing instrument as such president and Treasurer; and said Henry Endicott having affixed the seal of said Corporation to said instrument, they severally acknowledge to me that he, Wallace Hackett, as President, and he Henry Endicott, as Treasurer of said Corporation, executed the foregoing instrument for and on behalf

of said Corporation as the free and voluntary act of said corporation for the uses and purposes therein set forth. Then the said Henry Endicott, being by me first duly sworn on his oath, states that he is the Treasurer of said corporation, is acquainted and is the custodian, and has in his possession the corporate seal of said Corporation, and that the seal hereinbefore affixed is the corporate seal of said Corporation, and was affixed by him as such Treasurer by order of the Board of Directors of said Corporation.

In Witness Whereof, I have hereunto set my hand and seal the day and year first above written.

[Seal]

LLOYD A. FROST,

Notary Public.

My commission expires Dec. 5th, 1913. [842]

*In the District Court for the Territory of Alaska,  
Division No. 1, at Juneau.*

Case No. 968—A.

ALASKA GASTINEAU MINING COMPANY (a  
Corporation),

Plaintiff,

vs.

ALASKA TREADWELL GOLD MINING  
COMPANY (a Corporation), ALASKA  
UNITED GOLD MINING COMPANY (a  
Corporation), ALASKA MEXICAN GOLD  
MINING COMPANY (a Corporation), and  
ROBERT A. KINZIE,

Defendants.

**Deposition of Carl E. Heise [for Defendants].**

BE IT REMEMBERED, that pursuant to the stipulation of Counsel for the respective parties in

(Deposition of Carl E. Heise.)

the above-entitled action, attached hereto, together with the interrogatories, both direct and cross, also attached hereto, on the 12th day of March, 1913, in the City and County of San Francisco, State of California, before me, P. J. KENNEDY, a Notary Public in and for the City and County of San Francisco, State of California, personally appeared CARL E. HEISE, a witness produced on behalf of the defendants in the above-entitled action, now pending in said court, who being by me first duly sworn to testify to the truth, the whole truth, and nothing but the truth in said cause, and to whom I propounded said interrogatories, both direct and cross, testified as follows: [843]

Answer to Direct Interrogatory No. 1:

My name is Carl E. Heise. My home is in Oakland, Cal.

Answer to Direct Interrogatories Nos. 2 and 3:

By profession, I am an Electrical Engineer. Was educated at Cogswell Polytechnic College and University of California, having been graduated from the University of California in the year 1898.

Was employed about July, 1898, by Westinghouse Electric & Manufacturing Company, being attached to their San Francisco District Office. Acted as repair man, road engineer (locating and correcting troubles), construction engineer (erecting electrical apparatus and putting same into service, having charge of complete power plant installations) and office engineer up to about 1905. Then became connected with the Sales Department, acting as commer-

(Deposition of Carl E. Heise.)

cial engineer and salesman, handling the engineering details of application, also the sale of electrical apparatus.

In October, 1912, was appointed Acting District Manager, and later appointed District Manager for the San Francisco District office of the Westinghouse Electric & Manufacturing Company, which position I now hold. Having been continuously in the employ of Westinghouse Electric & Manufacturing Company since 1898.

Answer to Direct Interrogatory No. 4:

At the present time I am District Manager of the San Francisco District office of Westinghouse Electric & Manufacturing Company. I have charge of matters connected with the operation of that Company's affairs in this territory, exclusive of Treasury Department and Legal Department Affairs. [844]

Answer to Direct Interrogatory No. 5:

Yes.

Answer to Direct Interrogatory No. 6:

A current of electricity of not to exceed 300 electric horse-power, is that exact current which at a given voltage, will develop energy of 300 electric horse-power, or  $300 \times 746 = 223,800$  watts. The exact amount of current will depend upon several factors, for example: The voltage; whether direct current or single phase, two phase or three phase alternating current, etc.:

Answer to Direct Interrogatory No. 7:

The watt is the commercial unit of electric power.

Answer to Direct Interrogatory No. 8:

(Deposition of Carl E. Heise.)

A watt is the amount of power produced by an electric current when the product of the instantaneous values of current and voltage are unity. For example, one ampere times one volt equals one watt.

Answer to Direct Interrogatory No. 9:

Provided there is no phase displacement, then, the number of watts equals the product of amperes of current times voltage pressure times 1.732, and can be represented by the formula:

Watts=Amperes x Volts x 1.732.

The factor 1.732 is the square root of 3 and is a constant which applies to the three phase system.

The above is true, provided that the power factor is unity, but for other than unity power factor, it is necessary to multiply the above result by the power factor in order to determine the true watts. [845]

Answer to Direct Interrogatory No. 10:

746 watts.

Answer to Direct Interrogatory No. 11:

Rule No. 74-A of the Standardization Rules of the American Institute of Electrical Engineers, reads as follows:

“74a. Power Factor. Since the inherent capacity of alternating current generators, synchronous motors, and transformers, depends upon their voltage, and their current, they should be rated in kilovolt-amperes. If the apparatus is rated in kilowatts without specification as to the power factor, a power factor of 100 per cent shall be understood.

If rated in kilowatts and a power factor other



(Deposition of Carl E. Heise.)

than 100 per cent be specified, this should be understood as defining only the nature of the load, and not as implying an increase in the ampere rating of the apparatus, which should be based upon the kilowatt rating of 100 per cent power factor."

Consequently, where no specific power factor is stated, it is customary to assume the power factor to be unity or 100 per cent, and this is the custom which I adopt in my business.

Answer to Direct Interrogatory No. 12:

For the reasons explained in my reply to Interrogatory No. 11, I would understand the power factor to be 100 per cent.

Answer to Direct Interrogatories Nos. 13 and 14:

Both of these questions are answered by the following:

The power factor of an alternating current power system is not determined by the characteristics of the generating apparatus, but rather is determined by the characteristics of the apparatus utilizing or converting the current supplied by the generating apparatus. Therefore, if no definite power factor is specified for the load, or the type of motor, etc., is not definitely stated, the power seller would not be able to determine the current demand unless some definite power factor is assumed. Under these conditions, I would assume that Rule No. 74a of the [846] Standardization Rules of the American Institute of Electrical Engineers would apply and that it would be reasonable to assume a power factor of 100 per cent.

(Deposition of Carl E. Heise.)

Answer to Direct Interrogatory No. 15:

I would use a suitable ammeter.

Answer to Direct Interrogatory No. 16:

Assuming unity power factor, if the circuit-breaker is set to open at 60 amperes, it would permit the uninterrupted flow of a current slightly in excess of 300 horse-power.

Answer to Direct Interrogatory No. 17:

A wattmeter would not be the proper instrument to be used to measure a current of 300 electric horse-power, because an ammeter is the proper instrument to be used for measuring current.

Answer to Direct Interrogatory No. 18:

No.

Answer to Direct Interrogatory No. 19:

Varies.

Answer to Direct Interrogatory No. 20:

Yes, approximately.

Answer to Direct Interrogatory No. 21:

Yes.

Answer to Direct Interrogatory No. 22:

Yes.

Answer to Direct Interrogatory No. 23:

Yes, provided proper lamps are used. [847]

Answer to Direct Interrogatory No. 24:

Yes, under certain conditions, but this will depend upon the characteristics of the motor and starting device used, also whether the motor is started with or without its load.

Answer to Direct Interrogatory No. 25:

Answer in the reply to the preceding interrogatory.

(Deposition of Carl E. Heise.)

Answer to Direct Interrogatory No. 26:

In the case of a squirrel cage secondary type of induction motor, to obtain a starting torque equivalent to full load torque, may require a current in the line of four times full load current. Under similar conditions, the phase wound secondary type of induction motor may require one and one-half times full load current.

The exact difference between the starting current and the running current of the various forms of induction motors, will vary somewhat depending on the designs of the various motors.

Answer to Direct Interrogatory No. 27:

Not necessarily. The amount of current drawn from the line when starting such motors, would depend on the type of starting device used, would depend on what percentage of full load torque the motor was called upon to develop in starting, and also would depend on whether or not some auxiliary external starting device was used to assist in starting the motor.

Answer to Direct Interrogatory No. 28:

Yes.

Answer to Direct Interrogatory No. 29:

None that I have knowledge of.

Answer to Direct Interrogatory No. 30:

I believe the instantaneous circuit-breaker is in more [848] general use for the purpose specified.

Answer to Direct Interrogatory No. 31:

Yes.

Answer to Direct Interrogatory No. 32:

(Deposition of Carl E. Heise.)

An instantaneous circuit-breaker is a device intended to immediately open the circuit when the current has reached or exceeded a certain predetermined amount, and is intended to protect against damage, both the utilizing apparatus and the source of supply.

Answer to Cross-interrogatory No. 1:

I have never been in the employ of Mr. F. W. Bradley, and am not now, excepting that I have been requested by him to make this deposition.

Answer to Cross-interrogatory No. 2:

I have read the contract.

Answer to Cross-interrogatory No. 3:

Yes, particularly in the smaller capacities.

Answer to Cross-interrogatory No. 4:

I do not recall that I have ever seen a synchronous motor of such small capacity in commercial use.

Answer to Cross-interrogatory No. 5:

Not necessarily.

Answer to Cross-interrogatory No. 6:

I do not recall having observed a unity power factor in connection with the use of an induction motor of 300 H. P. or less. [849]

Answer to Cross-interrogatory No. 7:

A wattmeter is the device ordinarily used to measure the electrical energy delivered by a circuit.

Answer to Cross-interrogatory No. 8:

As defined in the Standardization Rules of the American Institute of Electrical Engineers, the accepted definition of power factor, which I adopt in practice, is:—

(Deposition of Carl E. Heise.)

“The power factor in alternating current circuits or apparatus is the ratio of the electric power in watts to the apparent power in volts-amperes. It may be expressed as follows:

$$\frac{\text{effective power}}{\text{apparent power}} = \frac{\text{effective watts}}{\text{total volt-amperes}} = \frac{\text{effective current}}{\text{total current}} = \frac{\text{effective voltage}}{\text{total voltage}}$$

Answer to Cross-interrogatory No. 9:

Under the assumptions named, and also assuming that the contract contains no further stipulations covering the matter, I would use a wattmeter to measure the power. However, it might be possible for the power factor to vary over a wide range and the current would therefore also vary and consequently, the conditions contained in the question could be met by several different circuit-breaker settings.

Answer to Cross-interrogatory No. 10:

I would consider it reasonable to expect that the power would be utilized in operating induction motors.

Answer to Cross-interrogatory No. 11:

I answered the last question in the affirmative.

Answer to Cross-interrogatory No. 12:

The answer to this inquiry will depend on what would be the power factor of an induction motor of the ordinary type, as stated in the inquiry. If the power factor was less than [850] approximately 94 per cent, assuming that the circuit-breaker would permit the uninterrupted flow of approximately 60 amperes, then a wattmeter would indicate that less than 300 true horse-power was being consumed.

The above answer is made on the assumption that no auxiliary apparatus was installed to correct for



(Deposition of Carl E. Heise.)

power factor. Of course, the installation of a synchronous condenser to correct for power factor could be made, in which case, neglecting the energy consumed by the synchronous condenser, the wattmeter reading would be correspondingly greater, depending upon the amount of power factor correction.

Answer to Cross-interrogatory No. 13:

Approximately 80 amperes.

Answer to Cross-interrogatory No. 14:

Yes, provided the contract called for delivery of 300 electric horse-power at 70 per cent power factor.

Answer to Cross-interrogatory No. 15:

It is true that the power factor of an induction motor at fractional load, is less than the power factor at full load and it is also true that the current at light load is less than the full load current.

Answer to Cross-interrogatory No. 16:

Synchronous motors are used in various parts of the world and for various purposes.

Answer to Cross-interrogatory No. 17:

It is impossible for me to state accurately the number of synchronous and induction motors respectively, which are in general use, but if the question is intended to get an expression as to relative numbers of each, I would state unquestionably [851] that particularly in the smaller sizes the induction motors predominate. Small synchronous motors are very much more expensive than induction motors of corresponding size and induction motors are more simple and easier to operate.

Answer to Cross-interrogatory No. 18:

(Deposition of Carl E. Heise.)

I answered Direct Interrogatory No. 24 in the affirmative.

Answer to Cross-interrogatory No. 19:

The fact that energy is sold at the rate of \$87.00 per horse-power per annum, does not determine the value of sudden peaks or starting surges in the load. Conditions might be such that in a plant of relatively small capacity and operated at or nearly full load, a sudden starting surge of 600 horse-power, would seriously interfere with the successful operation of the system and possibly greatly interfere with the success of operations dependent upon electric drive from such source of supply.

To take care of the starting surge stated in the question, might therefore mean the necessity for installing increased generating capacity.

Answer to Cross-interrogatory No. 20:

Not necessarily. As pointed out in my reply to No. 19, there are cases where a starting surge might seriously menace the successful operation of the system and this is true particularly if the starting surge or peak is a considerable percentage of the total plant capacity.

Answer to Cross-interrogatory No. 21:

It will depend upon the sizes and types of the various motors installed and also upon the starting conditions which these motors are called on to take care of, for example, whether [852] the motors must develop full load torque or greater or less than full load torque, when starting, and upon what auxiliary or external starting devices are provided.

(Deposition of Carl E. Heise.)

Answer to Cross-interrogatory No. 22:

Yes, if the power factor is corrected to 100 per cent by the use of suitable device or devices for power factor correction, and the amount of current required by such device or devices is not taken into consideration.

Answer to Cross-interrogatory No. 23:

No.

Answer to Cross-interrogatory No. 24:

I consider it impossible to answer this question in exact accordance with its wording, without apparently contradicting some of my answers to the direct interrogatories. In answering the direct interrogatories I have pointed out the necessity for power factor correction, in order to determine the real as distinguished from apparent power.

Answer to Cross-interrogatory No. 25:

In answering the direct interrogatories mentioned in this question, my replies are general in character and not restricted to terms of either real or apparent power.

C. E. HEISE.

Subscribed and sworn to before me this 14th day of March, A. D. 1913.

[Seal]

P. J. KENNEDY,

Notary Public in and for the City and County of  
San Francisco, State of California. [852½]

State of California,

City and County of San Francisco,—ss.

I, P. J. Kennedy, a duly appointed, qualified and acting Notary Public, in and for the City and County

of San Francisco, State of California, do hereby certify that the witness in the foregoing deposition named, Carl E. Heise, was by me first duly sworn to testify to the truth, the whole truth, and nothing but the truth; that thereupon his foregoing depositions was taken by me in the City and County of San Francisco, State of California, on the 12th day of March, 1913, at the hour of two o'clock P. M. of said day, and thereafter until completed; that I propounded said direct interrogatories and cross-interrogatories to said witness; that said witness answered said interrogatories, both direct and cross, and his answers are fully set forth in the transcript of said deposition attached hereto. I further certify that Estelle Starstrand, a disinterested person, was appointed by me to act as shorthand reporter to take the testimony of said witness in shorthand, and thereafter reduce the same to longhand typewriting, and was by me first duly sworn for that purpose. That said answers of said witness to said direct and cross-interrogatories were reduced to longhand typewriting by said Estelle Starstrand, and when completed as herein set forth, were carefully read over by said witness, and after being corrected by him in every particular desired, were by him subscribed in my presence. That I thereupon wrapped and sealed the said deposition, and directed it to the Clerk of the District Court of the Territory of Alaska, Division No. 1, at Juneau, in which Court said action is pending, in the manner and pursuant to the terms of the stipulation of respective counsel for the respective parties attached hereto.

WITNESS my hand this 14th day of March, A. D. 1913.

[Seal]

P. J. KENNEDY,  
Notary Public in and for the City and County of  
San Francisco, State of California. [853]

And the defendants, to further maintain the issues on their part, offered in evidence the deposition of E. A. Quinan, the witness whose testimony was taken by deposition in the City of San Francisco and upon the stipulation attached to said deposition, and who testified on oath as narrated in said deposition, which said deposition of said E. A. Quinan so taken was received and read in evidence and the testimony of said E. A. Quinan so given by deposition and received in evidence in this cause is as follows: [854]

*In the District Court for the Territory of Alaska,  
Division No. 1, at Juneau.*

Case No. 968—A.

ALASKA GASTINEAU MINING COMPANY,  
Plaintiff,

vs.

ALASKA TREADWELL GOLD MINING COM-  
PANY, a Corporation, ALASKA UNITED  
GOLD MINING COMPANY, a Corporation,  
ALASKA MEXICAN GOLD MINING  
COMPANY, a Corporation, and ROBERT A.  
KINZIE,

Defendants.

**Stipulation.**

It is hereby stipulated that the deposition of E. A.



Quinn may be taken in response to the hereunto attached interrogatories, both direct and cross, and that such deposition may be taken before P. J. Kennedy, a notary public in and for the State of California, or before Grant H. Smith, a notary public in and for State of California, or before any other notary public without commission from the Court; and when the deposition shall have been so taken it shall be returned by such notary, to the Clerk of the District Court, at Juneau, Alaska, as provided by law, and may be read in evidence on the trial in this case, subject to such objections as might be made if the witness were personally present and testifying orally except that all objections as to the form of the question are hereby waived.

Dated this 30th day of January, 1913.

SHACKLEFORD & BAYLESS,  
Z. R. CHENEY,

Attorneys for Plaintiff.

HELLENTHAL & HELLENTHAL,

Attorneys for Defendants. [855]

*In the District Court for the Territory of Alaska,  
Division No. 1, at Juneau.*

Case No. 968—A.

ALASKA GASTINEAU MINING COMPANY, a  
Corporation,

Plaintiff,

vs.

ALASKA TREADWELL GOLD MINING COM-  
PANY, a Corporation, ALASKA UNITED

GOLD MINING COMPANY, a Corporation,  
ALASKA MEXICAN GOLD MINING  
COMPANY, a Corporation, and ROBERT A.  
KINZIE,

Defendants.

**Interrogatories to be Propounded to E. A. Quinn.**

Interrogatory No. 1:

State your name. Where do you reside?

Interrogatory No. 2:

What is your profession? State your calling.

Interrogatory No. 3:

If you state that you are by profession an electrical engineer, you may state fully at what school or schools you were educated as such electrical engineer, and what experience you have had as an electrical engineer. State in detail.

Interrogatory No. 4:

What is your present occupation and position, what duties do you perform in connection with the position occupied by you?

Interrogatory No. 5:

Do you know what constitutes a current of electricity of not to exceed 300 electric horse-power?

Interrogatory No. 6:

If you answer the preceding question by stating that you do know what constitutes a current of not to exceed 300 electric [856] horse-power, you may state of what such a current consists, stating your views fully and in detail upon this question.

Interrogatory No. 7:

What is the unit of electric power?

Interrogatory No. 8:

If you answer the preceding interrogatory by stating that a watt is the unit of electrical power, you may state what constitutes a watt.

Interrogatory No. 9:

The amperes and voltage of a three phase current being known, how do you determine the number of watts?

Interrogatory No. 10:

How many watts constitute an electric horse-power?

Interrogatory No. 11:

Where a current of not to exceed a given amount of horse-power is spoken of and no mention is made of a power factor, what, if any power factor is necessarily understood?

Interrogatory No. 12:

In a case where it is sought to make a current of not to exceed 300 horse-power available for the use of another, and nothing is said as to the use of which said power was to be applied, or the type of motors or other apparatus to be installed, or the manner or place of use, what power factor is understood, if any?

Interrogatory No. 13:

Where the place and manner of use is not specified, and the question of what type of motor, the place of use, the manner of installing the motor, and other matters [857] in connection with the operations of the motor, are left entire in the control of the person to whom the power is furnished, and no partic-

ular power factor is mentioned or referred to, is it possible to supply any particular power factor as the power factor understood by the parties except unity power factor?

Interrogatory No. 14:

If you answer the preceding interrogatory by stating that it is not possible to supply or imply any power factor under the circumstances mentioned, except unity power factor, you may state your reasons why.

Interrogatory No. 15:

Where the current sought to be made available by a power company for the use of another is a current of not to exceed 300 electric horse-power to be taken from and at the generating plant, and no mention is made of a power factor, and neither the type or form of motor to be used is specified or referred to, nor the place of use, the manner in which it is to be installed, how would you proceed to measure such a current, and what apparatus would employ for that purpose in a case where the voltage is kept constant by means of a Tirril regulator?

Interrogatory No. 16:

Where an automatic instantaneous circuit-breaker is set so as to go out at about 60 amperes on a three phase current with a voltage of 2,300 impressed, would such apparatus permit the uninterrupted flow [858] of a current of not to exceed 300 horse-power?

Interrogatory No. 17:

Where a current of not to exceed 300 electric horse-

power is sought to be made available for the use of another, the current to be taken from and at the generating plant and no mention is made of a power factor, nothing being said concerning the type of motor, or other apparatus to be installed, or about the use to which the power is to be applied, as well as the type of motor used, the place of use, the manner of installing the motor, all being matters left to the control of the party to whom the power is furnished, could such a current be measured by means of a wattmeter which automatically takes in consideration the power factor?

Interrogatory No. 18:

You may state whether the power factor of the various types of motors in use is the same.

Interrogatory No. 19:

You may state whether the power factor of a motor in use is constant, or whether the same varies depending upon the conditions of the load and other matters in connection with the operations carried on.

Interrogatory No. 20:

Can a synchronous motor be so adjusted and used so as to operate at unity power factor? [859]

Interrogatory No. 21:

Are synchronous motors in general use?

Interrogatory No. 22:

Can 300 electric horse-power be developed by means of a synchronous motor from a three-phase current of about 56 amperes with a voltage of 2,300 impressed?

Interrogatory No. 23:



At the generating plant will such a current furnish 300 horse-power for lighting purposes?

Interrogatory No. 24:

Can a motor requiring a current of 300 horse-power to operate be started with a current of 300 horse-power?

Interrogatory No. 25:

If you answer the preceding interrogatory by stating that such a motor cannot be started with the same amount of power that it required to operate it, how much more power approximately does it require to start a simple squirrel cage motor of the induction type than it does to operate such motor?

Interrogatory No. 26:

What is the difference between the starting current and the running current of the various forms of induction motors?

Interrogatory No. 27:

If a time relay circuit-breaker were installed on the transmission line of a motor requiring 300 horse-power to operate and such motor were operated by a current flowing over such line and the circuit-breaker being set to permit the flow of such current and such motor were brought [860] to a state of rest and were afterwards started and placed in operation would the current drawn at the time such motor was started be of greater horse-power than the current drawn when such motor was in continuous operation, the voltage being kept constant?

Interrogatory No. 28:

Would not a time relay circuit-breaker set so as to

permit the flow of a current of 300 horse-power permit the taking of a current of greater horse-power for short periods of time?

Interrogatory No. 29:

Is there any other practical device by which the uninterrupted flow of a current could be limited to any given limit at all times except by means of an instantaneous circuit-breaker?

Interrogatory No. 30:

Where a current sought to be furnished or made available is to be a current of not to exceed a given electric horse-power, which, if any form of circuit-breaker is in general use, the instantaneous circuit-breaker or the time relay circuit-breaker?

Interrogatory No. 31:

If you answer the preceding interrogatory by stating that the instantaneous circuit-breaker is the form in general use, you may state whether it is the proper appliance to be used for such purpose. [861]

Interrogatory No. 32:

If you answer the preceding interrogatory by stating that the instantaneous circuit-breaker is the proper appliance under the facts stated in the two preceding interrogatories, you may state why the use of such instantaneous circuit-breaker is proper. [862]

*In the District Court for the District of Alaska,  
Division No. 1, at Juneau.*

No. 968—A.

ALASKA GASTINEAU MINING COMPANY,  
a Corporation,

Plaintiff,

vs.

ALASKA TREADWELL GOLD MINING COM-  
PANY, a Corporation, ALASKA UNITED  
GOLD MINING COMPANY, a Corpora-  
tion, MEXICAN GOLD MINING COM-  
PANY, a Corporation, and ROBERT A.  
KINZIE,

Defendants.

**Cross-interrogatories to be Propounded to C. L.  
Corey, W. J. Davis, C. E. Heise, E. A. Quinn,  
A. M. Hunt and H. C. Parker.**

Cross-interrogatory No. 1:

Are you or have you recently been in the employ  
of F. W. Bradley or any of his associates or of O.  
Mills or any of the defendant companies?

Cross-interrogatory No. 2:

Attached to these cross-interrogatories you will  
find a copy of the contract in dispute in this action  
and before answering any of the questions, either di-  
rect or cross, please read this contract and bear the  
same in mind in answering the questions addressed  
to you.

Cross-interrogatory No. 3:

Is it not a fact that induction motors are used upon

three-phase alternating currents by power consumers much more than synchronous motors? [863]

Cross-interrogatory No. 4:

Where have you seen a synchronous motor in use upon a three-phase alternating current for a load of not to exceed 300 horse-power?

Cross-interrogatory No. 5:

Is it not the power factor less than unity wherever induction motors are used upon a three-phase alternating current?

Cross-interrogatory No. 6:

If you answer the last cross-interrogatory in the negative, state the conditions under which you have observed a unity power factor in connection with the use of an induction motor of 300 horse-power or less.

Cross-interrogatory No. 7:

What is the ordinary device or instrument for measuring horse-power upon an electric current where it is the intention of the producer to sell and the consumer to purchase real as distinguished from apparent power?

Cross-interrogatory No. 8:

What is the accepted definition of power factor?

Cross-interrogatory No. 9:

Assuming in this case that it was the intention of the parties to deal in real and not apparent power and that the contract did not require the use of a synchronous motor and that the contract contemplated the use of the power contracted for in mining operations, would you not measure the power by means of a wattmeter and set your circuit-breaker

[864] according to the reading of your ammeter and voltameter at the instant when your wattmeter showed a consumption of 300 real horse-power.

Cross-interrogatory No. 10:

Assuming that it was the intention of the parties to the contract that the 300 horse-power called for therein was to be used in ordinary mining operations, would it not be reasonable to expect that the power would be applied to induction motors?

Cross-interrogatory No. 11:

If you answer the last question in the negative, state what observations and experience you have had with reference to the use of motors in connection with mining which would justify you in assuming that synchronous motors are commonly used in mining operations upon loads of 300 horse-power or less.

Cross-interrogatory No. 12:

If you answer direct interrogatory No. 16 to the effect that the apparatus mentioned in that interrogatory would permit the uninterrupted flow of a current not to exceed 300 horse-power, assume that the motor upon such current is an induction motor of the ordinary type and not a synchronous motor, can the benefit and use of 300 horse-power be secured under the conditions named in interrogatory No. 18, would not a wattmeter [865] indicate under such a setting that less than 300 horse-power was being taken?

Cross-interrogatory No. 13:

If you answer direct interrogatory No. 19 in the affirmative, that is to the effect that the power factor will vary depending upon the condition of the load



and other matters in connection with the operations carried on, assume for the purposes of this question that the contract called for the delivery of real and not apparent power, assume that the power factor is 70 instead of unity and that the voltage is 2300 volts, at what amperage would your circuit-breaker be set so as to permit the use of 300 real horse-power?

Cross-interrogatory No. 14:

Having answered the last question and assuming that the power factor is 70 when the full load of 300 horse-power is taken and that the power factor has been determined under normal conditions, if these conditions are maintained and not changed, should the circuit-breaker not remain as stated in answer to your last question?

Cross-interrogatory No. 15:

Assuming the conditions named in the last two cross-interrogatories, is it not a fact that the power factor would decrease if a fractional instead of a full load were used in operating the same machinery? Under such fractional [866] load, however, would you have to change the setting of the circuit-breaker so as to prevent the taking of more than the maximum of real power called for?

Cross-interrogatory No. 16:

If you answer direct interrogatory No. 21 in the affirmative, state what you mean by synchronous motors being in general use.

Cross-interrogatory No. 17:

If you answer direct interrogatory No. 21 in the affirmative, state specifically the number of instances

of synchronous motors of 300 horse-power or less, within your own knowledge, that are in use and state also the number of induction motors of 300 horse-power or less that are in general use.

Cross-interrogatory No. 18:

If you answer direct interrogatory No. 24 in the negative, state whether a motor requiring 300 horse-power to operate can be started from a plant with sufficient water-power available to generate 300 horse-power.

Cross-interrogatory No. 19:

Assuming horse-power to be worth \$87.00 per annum, what is the value of a thirty second starting surge of 600 horse-power? [867]

Cross-interrogatory No. 20:

Assuming ordinary stoppages at a mining plant and the lightening of loads at change of shift time and a monthly stoppage of three to four hours per month in using a current of 300 horse-power, would not these stoppages ordinarily more than compensate for starting surges of thirty seconds occurring from four to five times during a month?

Cross-interrogatory No. 21:

Where the beneficial use of 300 horse-power is contemplated by the parties to a contract and synchronous motors are not contemplated but the ordinary type of induction motor is contemplated and in actual use, is it possible to obtain the uninterrupted and beneficial use of 300 horse-power without taking a starting surge of more than 300 horse-power?

Cross-interrogatory No. 22:

If the beneficial and uninterrupted use of 300 real horse-power is contemplated by the parties and ordinary types of induction motors are in use as contemplated, can such use be obtained with an instantaneous circuit-breaker set at 56 amperes with a voltage of 2300 volts? [868]

Cross-interrogatory No. 23:

You have answered the direct interrogatories propounded by the defendants in this case. It is not a fact that all of these answers are based upon the assumption of making available 300 apparent horse-power as distinguished from 300 real horse power?

Cross-interrogatory No. 24:

If you answer the last question in the negative, point out how many and what of your answers, giving the number of the same, contemplate the use of real as distinguished from apparent power, assuming that the parties to the contract contemplated the use of induction motors of the ordinary type and not the use of synchronous motors.

Cross-interrogatory No. 25:

Assuming that the direct interrogatories in this action, Nos. 5 to 32, inclusive, call upon you to answer in terms of real instead of apparent power and under ordinary conditions with reference to the use of induction motors, it being assumed that the use of induction motors of the ordinary type was contemplated by the parties, answer each one of the questions in terms of real power, under the assumption that the parties contemplated the use of induction

motors of the ordinary type.

SHACKLEFORD & BAYLESS,  
Z. R. CHENEY,

Attorneys for Plaintiff. [869]

THIS INDENTURE AND AGREEMENT made and entered into this 14th day of October, 1909, by and between Oxford Mining Company hereinafter called the lessor and the Alaska Treadwell Gold Mining Company, the Alaska Mexican Gold Mining Company and The Alaska United Gold Mining Company hereinafter called the lessees.

P. J. K. WITNESSETH, First, the lessor has  
N. P. this date and does by these presents lease unto the lessees all of the following described real property situated on and near Sheep Creek in the Harris Mining District, District of Alaska, to wit:

The Mexico Mill-site U. S. Mineral Entry No. 25, lot 71B. The Belvedere Mill-site U. S. Mineral Entry No. 25, Lot 72B. The Jumbo Mill-site U. S. Mineral Entry No. 60, Lot No. 260. Also that certain piece or parcel of land beginning at a stake identical with post No. 2 Jumbo Mill-site U. S. Survey No. 260 on the meander line of Gastineau Channel; thence first course along the meander line of Gastineau Channel at ordinary high water  
P. J. K. mark N. 52 00' W. 54 feet to stake No. 2;  
N. P. thence second course No. 48 15' E. 200 feet to stake No. 3; then S. 52.00' E. 54 feet to the N. W. side line of Jumbo Mill-site U. S. survey No. 260, 200 feet to stake No. 1, the place of beginning

containing an area of one quarter of an acre more or less, courses expressed from the true meridian Mag. Var. 2930'; and also that certain water right known as the Sheep Creek water right and located on Sheep Creek about three quarters of a mile from its mouth, together with the flume and pipe-line connecting the same with the beach near the mill at the mouth of the said Sheep Creek, also the saw-mill, boarding house, lumber sheds, wharf landing, mill dam flumes, pen-stocks, water-wheels, and all other machinery and appliances used in connection with said saw mill, situated near the mouth of said Sheep Creek, together with all machinery, tools, equipment, plants of every kind and description now upon said property for a term of ten (10) years from the date hereof at a

monthly rental of one hundred and twenty-

P. J. K. five (\$125.00) dollars per month; payable

N. P. in gold coin of the United States on the first day of each month during the term of

said lease at the office of the lessees at Treadwell, Alaska; and it is hereby agreed, that if any rent shall be due and unpaid, or if default shall be

P. J. K. made in any of the covenants herein con-

N. P. tained, that it shall be lawful for the lessor to re-enter said premises and remove all

persons therefrom, and the leasees do hereby covenant, promise and agree to pay the lessor the said rent in the manner hereinbefore specified, and not to let or underlet the whole or any part of said premises without a written consent of lessor, nor to assign this lease or any part thereof without said written con-



sent, and at the expiration of said term the party of the second part will quit and surrender said premises in as good state and condition as the same now are.

It is the intention of the lessees to erect,  
P. J. K. equip and maintain upon said premises a  
N. P. water-power plant of substantial size and  
efficiency for the generation of electric  
power, and if at any time after two (2) years from  
the date hereof the lessor or its assigns shall elect to  
take a current of not to exceed three hundred (300)  
electric horse-power which shall be taken from and  
at the generating plant to be installed upon the leased  
premises hereinbefore described, the lessees under-  
take, covenant and agree to deliver said current to the  
lessor or its assigns upon the execution and delivery  
by the lessor or its assigns to the lessee of a deed or  
deeds conveying said leased property here-  
P. J. K. in described to the parties of the second  
N. P. part. If prior to the expiration of nine  
years from the date hereof the lessor does  
not elect to convey to lessees or their assigns the  
property herein [870] leased and accept in full  
consideration therefor the right to the use  
P. J. K. the three hundred (300) electric horse-  
N. P. power hereinbefore mentioned, the lessee  
may at their option prior to the expiration  
of the ten (10) years provided in this lease purchase  
the property herein leased absolutely from the lessor  
by paying to the lessor the sum of Twenty-five Thou-  
sand Dollars (\$25,000,) in gold coin of the United  
States; and the lessor covenants and agrees upon

tender of said sum of Twenty-five Thousand dollars (\$25,000,) to execute and deliver such deeds of conveyance to the property herein leased as hereinbefore specified, excepting only as to the title to (1) the one quarter acre tract hereinbefore described and (2) the premises occupied and used by the existing wharf of the lessor to both of which the lessor now asserts only possessory titles. The lessees may at their own cost and expense undertake to perfect the said titles and should lessee wish so to do the lessor shall lend all proper assistance in its power including the using of its name, and should the said titles be so

P. J. K. perfected to the said premises or either of

N. P. them, they shall become the property of the lessor and remain covered by this lease and subject to all the terms and conditions thereof.

The covenants herein contained shall be construed as running with the land and as a charge

P. J. K. thereon, so that any successor or successors

N. P. in interest to the lessor and or lessees who may acquire any interest in and to the titles to the said land shall be bound by this conveyance in the same manner as if they had executed this agreement; and the lessees hereof may require at their option that the property herein described by conveyed by the lessor to a responsible Trustee for the purpose of carrying out the terms of this agreement, or that deeds and conveyances covering the property herein leased be placed in escrow so as to insure delivery of the same if required under the provisions of any of the covenants of this lease.

If neither of the options herein provided for are  
accepted by either the lessor or the lessees  
P. J. K. then the property and rights herein de-  
N. P. scribed with all the improvements that are  
or that may be hereafter placed on the said  
premises shall be and become the property of the  
lessor.

The provisions herein as to the delivery of three  
hundred (300) horse-power at the generating plant  
to be installed on the premises herein described con-  
templates the delivery of an uninterrupted current,  
but the lessees shall not be liable for damages that  
may arise from operating and physical causes beyond  
its control.

IN WITNESS WHEREOF, the parties hereto  
have hereunto set their hands and seals the day and  
year first above written.

Executed in triplicate.

HAROLD LAWRENCE.

WALTER W. BLACK.

OXFORD MINING COMPANY.

WALLACE HACKETT,

President.

\_\_\_\_\_ ,

Treasurer.

\_\_\_\_\_ MINING COMPANY,

\_\_\_\_\_ ,

President,

\_\_\_\_\_ ,

Secretary,

ALASKA MEXICAN GOLD MINING CO.

By H. H. TAYLOR,

President,

F. A. HAMMERSMITH,

Secretary,

ALASKA UNITED GOLD MINING CO.

By H. H. TAYLOR,

President,

F. A. HAMMERSMITH,

Secretary. [871]

State of California,

City and County of San Francisco,—ss.

On this 12th day of November, in the year One Thousand Nine Hundred and Nine, before me, P. J. Kennedy, a Notary Public, in and for said City and County, residing therein, duly commissioned and sworn, personally appeared H. H. Taylor, and F. A. Hammersmith known to me to be the President and Secretary respectively of Alaska Mexican Gold Mining Company and Alaska United Gold Mining Co., the Corporations that executed the within and foregoing instrument, and to be the officers who executed the said instrument on behalf of said Corporations therein named, and they acknowledged to me that such corporations executed the same.

In Witness Whereof, I have hereunto set my hand and affixed my official seal, at my office, in the said City and County of San Francisco, the day and year last above written.

[Seal]

P. J. KENNEDY,

Notary Public in and for the City and County of San Francisco, State of California.

State of California,

City and County of San Francisco,—ss.

On this 12th day of November in the year One Thousand Nine Hundred and Nine, before me, P. J. Kennedy, a Notary Public in and for said City and County, residing therein, duly commissioned and sworn, personally appeared H. H. Taylor and F. A. Hammersmith known to me to be the president and secretary respectively of Alaska Treadwell Gold Mining Co., the corporation that executed the within and foregoing instrument and to be the officers who executed the said instrument on behalf of said corporation therein named, and they acknowledged to me that such corporation executed the same.

In Witness Whereof, I have hereunto set my hand and affixed my official seal at my office, in the said City and County of San Francisco, the day and year last above written.

[Seal]

P. J. KENNEDY,

Notary Public in and for the City and County of San Francisco, State of California.

COMMONWEALTH OF MASSACHUSETTS,  
COUNTY OF SUFFOLK,  
CITY OF BOSTON,—ss.

Be it remembered, that on this 14th day of October, 1909, before me, the undersigned, a Notary Public in and for said County and State, personally appeared Wallace Hackett, President, and Henry Endicott, treasurer of the Oxford Mining Company, a corporation organized under the laws of the State of Maine, to me known to be the individuals de-



scribed in and who executed the foregoing instrument as such president and Treasurer; and said Henry Endicott having affixed the seal of said corporation to said instrument, they severally acknowledged to me, that he, Wallace Hackett, as President, and he, Henry Endicott, as Treasurer of said corporation, executed the foregoing instrument for and on behalf of said corporation as the free and voluntary act of said corporation for the uses and purposes therein set forth. Then the said Henry Endicott, being by me first duly sworn, on his oath states that he is the Treasurer of said corporation, is acquainted and is the custodian and has in his possession the corporate seal of said corporation, and that the seal hereinbefore affixed *in* the corporate seal of said corporation and was affixed by him as such Treasurer by order of the Board of Directors of said Corporation. [872]

In Witness Whereof, I have hereunto set my hand and seal the day and year first above written.

[Seal]

LLOYD A. FROST,

Notary Public.

My commission expires Dec. 5, 1913. [873]

*In the District Court for the Territory of Alaska,  
Division No. 1, at Juneau.*

Case No. 968—A.

ALASKA GASTINEAU MINING COMPANY (a  
Corporation),

Plaintiff,

vs.

ALASKA TREADWELL GOLD MINING COM-

PANY (a Corporation), ALASKA UNITED GOLD MINING COMPANY (a Corporation), ALASKA MEXICAN GOLD MINING COMPANY (a Corporation), and ROBERT A. KINZIE,

Defendants.

**Deposition of E. A. Quinn [for Defendant].**

BE IT REMEMBERED that pursuant to the stipulation of Counsel for the respective parties in the above-entitled action, attached hereto, together with the interrogatories, both direct and cross, also attached hereto, on the 28th day of February, 1913, in the City and County of San Francisco, State of California, before me, P. J. Kennedy, a Notary Public in and for the City and County of San Francisco, State of California, personally appeared E. A. Quinn, a witness produced on behalf of the defendants in the above-entitled action, now pending in said court, who being by me first duly sworn to testify to the truth, the whole truth, and nothing but the truth in said cause, and to whom I propounded said interrogatories, both direct and cross, testified as follows: [874]

Answer to Direct Interrogatory No. 1:

E. A. Quinn, San Francisco, Cal.

Answer to Direct Interrogatory No. 2:

Have been following the profession of electrical engineer.

Answer to Direct Interrogatory No. 3:

I was not educated at any school of Electrical Engineering. My experience started when employed by the Chicago-Edison Company in Chicago in 1893 as

(Deposition of E. A. Quinn.)

Meter Inspector. Since 1893, I have continually been engaged in the electrical profession. Have been continually employed successively by the following companies:

Edison Light & Power Company, San Francisco. Electric & Water Plant at Santa Clara. Standard Electric Company of California. My experience varies from the operating, construction and sales departments. Westinghouse Electric Manufacturing Company. Nevada California Power Company. Was General Superintendent of the Nevada California Power for three years. I have been sales engineer of electrical apparatus in the San Francisco Office of the Allis Chalmers Company from February, 1910, to the present date.

Answer to Direct Interrogatory No. 4:

My present duties consist of taking care of the electrical business of the Allis-Chalmers Company, handled from the San Francisco District Office. My duties consist of selling, testing and whatever engineering of an electrical nature is connected with same. [875]

Answer to Direct Interrogatory No. 5:

Yes.

Answer to Direct Interrogatory No. 6:

The term "horse-power" has been accepted by Engineering Societies as equivalent to the unit of power. Mechanically it is equal to the lifting of a weight of 33,000 pounds one foot in one minute. A watt is the electrical unit of power. Without going into technical details as to what constitutes a watt, we may say

(Deposition of E. A. Quinn.)

that if a current of amperes flows through a resistance of ohms under a pressure of volts, then volts by amperes equals watts. The total watts divided by 746 watts equals the horse-power. Then 746 watts equal 1 electrical horse-power. A current of 300 electric horse-power would therefore equal 300 times 746 watts.

As a further answer to the question, it is a sufficient quantity of electric current which can develop 300 electric horse-power.

Answer to Direct Interrogatory No. 7:

The watt.

Answer to Direct Interrogatory No. 8:

The current in amperes by the pressure in volts equals the watts. One ampere by one volt equals one watt, there being no lag or lead of either the volt or ampere.

Answer to Direct Interrogatory No. 9:

The number of watts in 3 phase current, no mention being made of power factor, is ascertained by multiplying the amperes by the volts by the square root of 3. This last factor is the constant which indicates the relation of volts, amperes or watts in a 3 Phase circuit. [876]

Answer to Direct Interrogatory No. 10:

746 watts.

Answer to Direct Interrogatory No. 11:

Unity, according to the rules of the American Institute of Electrical Engineers, which I follow in my business. All Generators, unless otherwise specified, are rated by the Manufacturers in kilowatts, they

(Deposition of E. A. Quinn.)

assuming that the power factor is unity.

Answer to Direct Interrogatory No. 12:

Unity.

Answer to Direct Interrogatory No. 13:

It is not possible. Where no power factor is specified, the Manufacturer rates electrical generating apparatus in kilowatts at unity power factor. When in service an electrical generator has no control whatsoever over the power factor, which power factor is governed entirely by the load connected to the generator and by other conditions over which the generator has entirely no control.

Answer to Direct Interrogatory No. 14:

This question has been to some extent answered by the preceding. The variations in an electric load to an electric circuit will instantaneously affect the generator. If the power factor of the connected load is low, the power factor of the generator will be low. Nothing can be done at the generator and to improve or better this power factor.

In contracting for a current of 300 electric horse-power, no mention being made of power factor, the purchasing party clearly implies that it his intention to use 300 times 746 watts. Had he contemplated purchasing electric current at some other than unity power factor and this electric current was furnished him at a lower power factor than unity, he would [877] not be purchasing or be supplied with a current of 300 electric horse-power.

Answer to Direct Interrogatory No. 15:

By graphic ammeters, which register the minimum



(Deposition of E. A. Quinn.)

and maximum current furnished, and all variations between these two points.

Answer to Direct Interrogatory No. 16:

Yes, and slightly in excess thereof.

Answer to Direct Interrogatory No. 17:

No.

Answer to Direct Interrogatory No. 18:

No.

Answer to Direct Interrogatory No. 19:

The power factor of an Induction Motor is affected by various conditions, such as load, line conditions, changes of speed. The power factor of a Synchronous Motor can be maintained at unity.

Answer to Direct Interrogatory No. 20:

Yes.

Answer to Direct Interrogatory No. 21:

Yes.

Answer to Direct Interrogatory No. 22:

Yes.

Answer to Direct Interrogatory No. 23:

Yes. On incandescent lamps. [878]

Answer to Direct Interrogatory No. 24:

Requiring a current of 300 Horse- (E. A. Quinn) power to operate under certain conditions an Induction Motor can be started with a current of 300 electric horse-power. These conditions will depend on the internal characteristics of the motor, the method of starting the motor, whether the motor starts up under load.

Answer to Direct Interrogatory No. 25:

The amount of starting current required to start

(Deposition of E. A. Quinn.)

a simple Squirrel Cage motor will depend altogether on the type of the motor, the brake horse-power developed in starting, and the method adopted for using the horse-power developed on the motor shaft. It is safe to say that a Squirrel Cage motor in starting might require as high as five times full load current, if it was thrown on the circuit without reducing the voltage. A Squirrel Cage Induction Motor of the usual type will require in starting from two or three times full load current. The ordinary type of Squirrel Cage motors could start on less than full load current.

Answer to Direct Interrogatory No. 26:

This question is practically answered by Answer No. 25, adding that the power factor of some types of motors could be much lower in starting than when the motor is operating at full speed.

Answer to Direct Interrogatory No. 27:

Not necessarily so. The amount of current required to start a motor will depend altogether on the type of motor, and the type of starter. An Induction Motor of the horse-power mentioned would under some conditions require more. A synchronous motor might require less. [879]

Answer to Direct Interrogatory No. 28:

Yes.

Answer to Direct Interrogatory No. 29:

Only by means of an instantaneous circuit-breaker.

Answer to Direct Interrogatory No. 30:

The instantaneous circuit-breaker.

Answer to Direct Interrogatory No. 31:

It is the only practical and proper appliance to

(Deposition of E. A. Quinn.)

use under the conditions as explained in Interrogatory No. 30.

Answer to Direct Interrogatory No. 32:

As I understand the issue, "A" agrees to sell to "B" a continuous current of 300 electric horse-power, no more, no less, and "B" expects to receive a continuous current of 300 electric horse-power, no more, no less. If the circuit carrying the 300 electric horse-power was not protected by some device which would operate instantaneously to open the circuit when the current exceeded the agreed current of 300 electric horse-power, "B" would, if only for a few seconds, be receiving more than the agreed upon amount. If the time limiting circuit-breaker were used, "A" would be furnishing and "B" would be receiving, during the period required for the time limiting relay to operate, in excess of the agreed upon amount. This amount depending upon the adjustment of the time limiting feature of the circuit-breaker. The additional functions of an instantaneous circuit-breaker is to protect both the delivery and receiving ends of the circuit. [880]

Answer to Cross-interrogatory No. 1:

Never, with the exception of the purpose of making this deposition.

Answer to Cross-interrogatory No. 2:

I have carefully read copy of the contract attached to the copy of the cross-interrogatories.

Answer to Cross-interrogatory No. 3:

Yes, especially in motors of small horse-power.

(Deposition of E. A. Quinn.)

Answer to Cross-interrogatory No. 4:

I have seen motors of 300 horse-power or less connected to a 3 phase alternating current. I might mention one at the Oneida Mine in Amador County, at the mill of the Combination Mines Company, Goldfield, Nev., at the sub-station of the Standard Electric Company of California, and at the sub-stations of the Pacific Gas & Electric Company.

Answer to Cross-interrogatory No. 5:

Not necessarily so, as if a number of Induction Motors are used, especially together with Synchronous Motors, the power factor can be easily maintained at unity.

Answer to Cross-interrogatory No. 6:

As I understand this question, it relates to the conditions governing the power factor of one motor having a capacity of 300 H.P. The power factor of a 300 H.P. Squirrel Cage type of Induction Motor could not be kept at unity, unless it was used with some power factor correcting device, such as a synchronous motor.

Answer to Cross-interrogatory No. 7:

When it is desired to purchase power, automatically [881] taking care of the power factor, integrating or graphic recording wattmeters are generally used. However, it is usual in contracts for power drawn up between a Power Supply Company and a consumer, where it is the intention to use wattmeters, to measure the power, these wattmeters automatically taking care of the power factor, there is generally a clause inserted in the contract limiting

(Deposition of E. A. Quinn.)

the "peak" of the current. By "peak" is meant the maximum amount of current which may be taken at any one instant, Power Companies insisting upon this clause as a matter of protection to themselves as well as to their customer. It is a well-known fact that motors of low power factor take in starting an abnormal amount of current, and if the supply of current from the generator end is limited, the starting current required is so large that it seriously interferes with the speed and voltage regulation of the generator.

Having complied with the instructions to carefully read the contract before answering any of the questions, I informed myself that the current of 300 electric horse-power mentioned in the contract was being used to operate a 300 H.P. Squirrel Cage Induction Motor, and that this current was supplied by two—1000 K.W. Generators. The starting of a 300 H.P. Squirrel Cage Induction Motor from such a source of current probably interferes with the proper voltage and speed regulation of the generator. This condition naturally would interfere with the speed and voltage regulation of all circuits connected to this generator. Where the surplus current supplied from this machine is furnished to other circuits and used for mining operations this condition might be the cause of considerable expense and inconvenience to all consumers connected to this circuit. [882]

Answer to Cross-interrogatory No. 8:

Power Factor, as an expression, is the medium used to express the difference between true and ap-



(Deposition of E. A. Quinn.)

parent watts, or the ratio of electric power in watts as compared to the apparent power in volt amperes.

Answer to Cross-interrogatory No. 9:

Assuming that it was the predetermined understanding of the litigants in this case that the intention was to purchase and furnish true watts, irrespective of how poor the power factor was, an integrating or graphic recording wattmeter would measure the true watts.

As to setting a circuit-breaker to operate at the instant when the reading of an ammeter and voltmeter indicates 300 times 746 watts as indicated by the voltmeter, this would be a practical impossibility, for the reason that the readings of the voltmeter and ammeter would vary in direct ratio to the variation of the power factor of the apparatus using the electric current, which variation would be caused by changes in load conditions, in line and other conditions.

Answer to Cross-interrogatory No. 10:

To entertain this assumption would require prior knowledge as to what mining operation would be contemplated. Not having this prior knowledge, it is just as reasonable to assume that the current might be used for incandescent lighting, for heating purposes, for reduction purposes, for the operation of Synchronous Motors, for Motor Generators, or for Rotary Converters.

Assuming that prior knowledge was at hand as to the nature of ordinary mining operations in this case, it is more reasonable to assume that a number

(Deposition of E. A. Quinn.)

of small motors would be used, instead of one large motor, and it is more reasonable to assume that the Purchaser wishing to avail himself of the full benefit [883] of the current of 300 electric horse-power, and wishing to install only one motor, would install a motor which would operate at unity power factor.  
Answer to Cross-interrogatory No. 11:

I have mentioned the cases I know of where Synchronous Motors of 300 H. P. or less were in use.  
Answer to Cross-interrogatory No. 12:

Yes, if the power factor of the Induction Motor is kept at unity. A wattmeter would automatically take care of the power factor and the source of supply would be furnishing in excess of the current of 300 electric horse-power.

Answer to Cross-interrogatory No. 13:

Assuming that the power factor is 70 instead of unity, to permit the flow of a current of 300 electric horse-power, the circuit-breaker would be set at 80.3 amperes.

Answer to Cross-interrogatory No. 14:

Assuming that the power factor remains permanently at 70 and does not change under any conditions, the circuit-breaker should be set at 80.3 amperes. However, in the operation of an ordinary Squirrel Cage type of Induction Motor using a current of 300 electric horse-power having no device for improving the power factor, this permanent condition as to power factor could not exist.

Answer to Cross-interrogatory No. 15:

No.

(Deposition of E. A. Quinn.)

Answer to Cross-interrogatory No. 16:

Synchronous Motors are preferred instead of Induction Motors for connection to circuits by almost all Power Companies. This is especially true of the larger sizes of motors. One [884] Power Company with whom I was connected would not allow an Induction Motor of over 200 H.P. to be connected to their circuits. The reason was that in starting such a motor a disturbance was caused which affected the speed regulation of all other connected motors. The power was almost exclusively used by Mining Companies, and the changes in speed interfered with their milling operations. This condition was especially severe where concentrating or cyanide operations were carried on.

Answer to Cross-interrogatory No. 17:

I have already mentioned the number of Synchronous Motors which have come under my observation. There is no means of ascertaining the number of Induction Motors in general use.

Answer to Cross-interrogatory No. 18:

Yes.

Answer to Cross-interrogatory No. 19:

The value in United States Gold Coin of a 600 H.P. starting surge continuing during a period of 30 seconds is practically insignificant. The value of keeping such a surge off the supply system cannot be measured in dollars and cents. Such a surge under some conditions might cause the suspension of shutting down all mining operations which were receiving their electric power from the source of sup-

(Deposition of E. A. Quinn.)

ply affected by such a surge.

Answer to Cross-interrogatory No. 20:

The three conditions as mentioned would not compensate for the harm done by such a heavy starting surge. Assuming that the source of power is limited and such a surge occurred, and that the source of supply was furnishing electric current to operate electrically driven pumps handling cyanide solutions, the stoppage or interference with the duty of these pumps would possibly cause [885] a very large monetary loss. This is merely an instance where such an interference could cause a serious loss.

If a motor of 300 H.P. requires 600 H.P. to start, it is reasonable to assume that the Supply Company must at all times have available 600 H.P. to start the motor, and if the motor under full load used but 300 H.P. there would necessarily be 300 H.P. standing idle. Assuming that the cost of installing 1 H.P. is \$100.00, this would represent an investment of \$30,000.00, which at 6% per annum would amount to \$1800.00. To this there should be added depreciation on the idle machinery, which under usual engineering practice in a plant of this kind is computed at 7% per annum, which would amount to \$2100.00 for depreciation.

Answer to Cross-interrogatory No. 21:

Yes.

Answer to Cross-interrogatory No. 22:

Yes, by using a power factor correction device such as a Synchronous Motor, Generator, or a Syn-

chronous Converter.

Answer to Cross-interrogatory No. 23:

No.

Answer to Cross-interrogatories Nos. 24 and 25:

In my opinion these questions are so worded that the idea cannot be readily understood. The relationship between true and apparent watts has been explained by previous answers. There is nothing further that I can say in answer to these two questions.

EDWARD A. QUINN.

Subscribed and sworn to before me this 3 day of March, 1913.

[Seal]

P. J. KENNEDY,

Notary Public in and for the City and County of San Francisco, State of California. [886]

State of California,

City and County of San Francisco,—ss.

I, P. J. Kennedy, a duly appointed, qualified and acting Notary Public in and for the City and County of San Francisco, State of California, do hereby certify that the witness in the foregoing deposition named, E. A. Quinn, was by me first duly sworn to testify to the truth, the whole truth, and nothing but the truth; that thereupon his foregoing deposition was taken by me in the City and County of San Francisco, State of California, on the — day of February, 1913, at the hour of two o'clock P. M. of said day, and thereafter until completed; that I propounded said direct interrogatories and cross-interrogatories to said witness; that said witness answered said interrogatories, both direct and cross,



and his answers are fully set forth in the transcript of said deposition attached hereto. I further certify that Estelle Starstrand, a disinterested person, was appointed by me to act as shorthand reporter to take the testimony of said witness in shorthand, and thereafter reduce the same to longhand typewriting, and was by me first duly sworn for that purpose. That said answers of said witness, E. A. Quinn, to said direct and cross-interrogatories were reduced to longhand typewriting by said Estelle Starstrand, and when completed as herein set forth, were carefully read over by said witness, and after being corrected by him in every particular desired, were by him subscribed in my presence. That I thereupon wrapped and sealed the said deposition, and directed it to the Clerk of the District Court of the Territory of Alaska, Division No. 1, at Juneau, in which Court said action is pending, in the manner and pursuant to the terms of the stipulation of respective counsel for the respective parties attached hereto.

WITNESS my hand this 3rd day of March, A. D. 1913.

[Seal]

P. J. KENNEDY,

Notary Public in and for the City and County of San Francisco, State of California. [887]

Whereupon the cause was submitted to the Court and the Court took the matter under advisement until the 12th day of June, 1913. [888]

[Plaintiff's Exhibit No. "1-A."]

A. G. Co. vs. A. T. G. M. Co. et al. Plffs. Ex.  
1A. R. E. R.

Office of  
ALASKA TREADWELL GOLD MINING CO.  
File No.  
Subject.

Main Office:

Mills Building,  
San Francisco, Cal.

Treadwell, Alaska, Aug. 10, 1909.

Henry Endicott, Esq.,  
101 Tremont Street,  
Boston, Mass.

Dear Sir:—

We have been talking to Mr. L. P. Shackelford about your water right on Sheep Creek, this district, and both he and ourselves have agreed upon what we consider an extremely fair proposition. Our conclusions have been drawn up in the shape of a document which Mr. Shackelford will present to you.

As it is now, this Sheep Creek water power is in jeopardy and can be taken at any time by adverse interests. Our proposed arrangement will preserve your rights while at the same time developing them and making the most use of them. I presume you are holding this water right for the value that it has had and may have in the future for working the Sheep Creek Mines and 30 stamp-mill connected therewith. Estimating conservatively, 150 H.P. is all the power these mines and mill ever required for

their past operations. The mill is amply large enough for the mine and surely 200 H.P. will more than take care of future requirements.

If the proposition is at all acceptable to you we would begin immediate work, thereby preserving your rights and returning you some monthly income. The proposition provides ample time in which you could decide either to sell the property outright or take 200 H.P. for the operation of the mines and mill.

Yours very truly,

F. W. BRADLEY [889]

**[Plaintiff's Exhibit No. 1 for Identification.]**

A. G. Co. vs. Al. T. Co. et al. Plffs. Ex. 1 for Ident. R. E. R. Recd. R. E. R.

(Copy)

Treadwell, Alaska, August 10, 1909.

Henry Endicott, Esq.,  
101 Tremont Street,  
Boston, Mass.

Dear Sir:

We have been talking to Mr. L. P. Shackelford about your water right on sheep creek this district and both he and ourselves have agreed upon what we consider an extremely fair proposition, our concession have been drawn up in the shape of a document which Mr. Shackelford will present to you as it is now this sheep creek water power is in jeopardy and can be taken at any time by adverse interests our proposed arrangement will preserve your rights while at the same time developing them and making the most use of them. I presume you

are holding this water right for the value that it has had and may have in the future for working the sheep creek mines and thirty stamp mill connected therewith estimating conservatively 150 HP is all the power these mines and mills ever required for their past operations. The mill is amply large enough for the mine and surely two hundred H.P. will more than take care of future requirements if the proposition is at all acceptable to you we would begin immediate work, thereby preserving your rights and returning you some monthly income the proposition provides amply time in which you could decide either to sell the property outright or take two hundred H.P. for the operation of the mines and mill, your very truly,

F. W. BRADLEY. [890]

**[Plaintiff's Exhibit No. 2 for Identification.]**

A. G. Co. vs. A. T. Co. et al. Plffs. Ex. 2 for Ident. R. E. R. Recd. R. E. R.

(Copy)

Boston, August 23, 1909.

F. W. Bradley,

Wardner, Idaho.

Will lease power on terms proposed subject to consent trust company if three hundred horse-power is substituted for two hundred.

HENRY ENDICOTT.

**[Plaintiff's Exhibit No. 3 for Identification.]**

A. G. Co. vs. A. T. Co. et al. Plffs. Ex. 3 for  
Ident. R. E. R. Recd. R. E. R.

(Copy)

Henry Endicott.

You may substitute three hundred for two hundred horse power may I cable Sup't Kinzie to begin immediate protective measure.

F. W. BRADLEY. [891]

**[Plaintiff's Exhibit No. "3-A."]**

A. G. Co. vs. A. T. G. M. Co et al. Plffs. Ex. 3-A.  
R. E. R.

THE WESTERN UNION TELEGRAPH COMPANY.

\* \* \* \* \*

RECEIVED at 109 State Street, Boston.

Telephone: Main 6821.

(3)

1 Co., CT. .20 Paid

409

Spokane, Washn., Aug. 25-09,

Henry Endicott,

Boston.

You may substitute three hundred for two hundred horse power. May I cable superintendent Kinzie to begin immediate protective measures.

F. N. BRADLEY. 1125a.

MONEY TRANSFERRED BY TELEGRAPH.  
ALWAYS OPEN. CABLE OFFICE. [892]



**[Plaintiff's Exhibit No. 4 for Identification.]**

A. G. Co. vs. A. T. Co., et al. Plffs. Ex. 4 for  
Ident. R. E. R. Recd. R. E. R.

UNITED STATES OF AMERICA.

STATE OF NEW YORK.

by

EDWARD LAZANSKY,

Secretary of State and Custodian of the Great Seal  
Thereof.

IT IS HEREBY CERTIFIED, That JOSE E. PIDGEON was, on the day of the date of the annexed Certificate and Attestation, Second Deputy Secretary of State of the State of New York, and duly authorized by the laws of said State to make such Attestation and Certificate and to perform the duties belonging to the Secretary of State in making such Attestation and Certificate, in like manner as said Secretary of State; that the said Certificate and Attestation are in due form and executed by the proper officer that the seal affixed to said Certificate and Attestation is the seal of office of the Secretary of State of the State of New York; that the signature thereto of the said Second Deputy Secretary of State is in his own proper handwriting, and is genuine; and that full faith and credit may and ought to be given to his official acts; and, further, that the Secretary of State is the Custodian of the Original Law so certified and attested and Custodian of the Great Seal of said State, hereunto affixed.

(SEAL)

In TESTIMONY WHEREOF, The Great Seal of the State is hereunto affixed.

WITNESS my hand at the City of Albany, the eighth day of August in the year of our Lord one thousand nine hundred and twelve.

EDWARD LAZANSKY,  
Secretary of State. [893]

## CHAP. 61.

### AN ACT

Relating to stock corporations, constituting chapter fifty-nine of the consolidated laws.

Became a law Feb. 17, 1909, with the approval of the governor. Passed, three-fifths being present.

The people of the State of New York, represented in Senate and Assembly, do enact as follows:

## CHAPTER 59 OF THE CONSOLIDATED LAWS.

### STOCK CORPORATION LAW.

\* \* \* \* \*

#### Article 2. General provisions (§§ 5-18).

\* \* \* \* \*

### ARTICLE 2.

#### GENERAL PROVISIONS.

\* \* \* \* \*

#### Section 15. Merger.

\* \* \* \* \*

§. 15. MERGER. Any domestic stock corporation and any foreign stock corporation authorized to do business in this state lawfully owning all the stock of any other stock corporation organized for, or engaged in business similar or incidental to that of the possessor corporation may file in the office of the secretary of state, under its common seal, a cer-

tificate of such ownership, and of the resolution of its board of directors to merge such other corporation, and thereupon it shall acquire and become, and be possessed of all the estate, property, rights, privileges and franchises of such other corporation, and they shall vest in and be held and enjoyed by it as fully and entirely and without change or diminution as the same were before held and enjoyed by such other corporation, and be managed [894] and controlled by the board of directors of such possessor corporation, and in its name, but without prejudice to any liabilities of such other corporation or the rights of any creditors thereof. Any bridge corporation may be merged under this section with any railroad corporation which shall have acquired the right by contract to run its cars over the bridge of such bridge corporation.

A—108.

STATE OF NEW YORK,

OFFICE OF THE SECRETARY OF STATE.—ss.

I have compared the preceding copy of Section 15 of the Stock Corporation Law, Chapter 61 of the Laws of 1909 with the original law on file in this office, and do hereby certify that the same is a correct transcript therefrom and of the whole of said section.

GIVEN under my hand and the Seal of Office of the Secretary of State, at the City of Albany this eighth day of August in the year one thousand nine hundred and twelve.

JOSE E. PIDGEON,

Second Deputy Secretary of State. [895]

**[Plaintiff's Exhibit No. 5.]**

A. G. Co. vs. A. T. Co. et al. Plffs. Ex. 5. R.  
E. R.

UNITED STATES OF AMERICA.

STATE OF NEW YORK.

by

EDWARD LAZANSKY,

Secretary of State and Custodian of the Great Seal  
Thereof.

IT IS HEREBY CERTIFIED, That Jose E. Pidgeon was, on the day of the date of the annexed Certificate and Attestation, Second Deputy Secretary of State of the State of New York, and duly authorized by the laws of said State to make such Attestation and Certificate and to perform the duties belonging to the Secretary of State in making such Attestation and Certificate, in like manner as said Secretary of State; that the said Certificate and Attestation are in due form and executed by the proper officer; that the seal affixed to said Certificate and Attestation is the seal of office of the Secretary of State of the State of New York; that the signature thereto of the said Second Deputy Secretary of State is in his own proper handwriting, and is genuine; and that full faith and credit may and ought to be given to his official acts; and, further, that the Secretary of State is the Custodian of the original certificate of Merger so certified and attested and Custodian of the Great Seal of said State, hereunto affixed.

(SEAL)

IN TESTIMONY WHEREOF, The Great Seal

of the State is hereunto affixed. WITNESS my hand at the City of Albany the eighth day of July, in the year of our Lord one thousand nine hundred and twelve.

EDWARD LAZANSKY,  
Secretary of State. [896]

# CERTIFICATE OF MERGER

by the

ALASKA GASTINEAU MINING COMPANY

For the Merging of the

ALASKA PERSEVERANCE MINING COMPANY.

The Alaska Gastineau Mining Company, pursuant to the provisions of Section 15 of the Stock Corporation Law of the State of New York, hereby certifies, under its common seal, as follows:

FIRST: That the Alaska Gastineau Mining Company is a stock corporation, organized and existing under the laws of the State of New York, and that its certificate of incorporation was duly filed and recorded in the office of the Secretary of State of said State on the 14th day of January, 1911, and that a duplicate of said certificate of incorporation was also filed and recorded in the office of the Clerk of New York County, in said State on the 16th day of January, 1911.

SECOND: That on and prior to January 31, 1911, the Alaska-Perseverance Mining Company was also a stock corporation organized and existing under the laws of the State of New York, and that its certificate of incorporation was duly filed and recorded in the office of the Secretary of State of said State on



or about the 17th day of July, 1901, and in the office of the Clerk of New York County in said State on or about July 18th, 1901.

THIRD: That on said January 31, 1911, the Alaska Gastineau Mining Company lawfully owned all the capital stock of said Alaska-Perseverance Mining Company, and on that day the directors of the said Alaska Gastineau Mining Company, by a resolution duly adopted, determined to and did merge said Alaska-Perseverance Mining Company, which resolution was as follows, to wit: [897]

WHEREAS, the Alaska Gastineau Mining Company was organized for business similar to that of the Alaska-Perseverance Mining Company; and

WHEREAS, the said Alaska Gastineau Mining Company has acquired and now lawfully owns all the stock of said corporation and desires to merge the said Alaska-Perseverance Mining Company, and to be possessed of all the estate, property, rights, privileges and franchises of said corporation;

NOW, THEREFORE, RESOLVED, that the Alaska Gastineau Mining Company merge and it hereby does merge said Alaska-Perseverance Mining Company; and

FURTHER RESOLVED, that the officers of this company be, and they hereby are authorized and directed to make and execute, under the common seal of this company, a certificate of such ownership, and of the adoption of this resolution of the board of directors of this company to merge the said Alaska-Perseverance Mining Company pursuant to statute.

IN WITNESS WHEREOF, the Alaska Gas-

tineau Mining Company has caused this certificate to be signed in its behalf by its president, and its common or corporate seal to be hereunto affixed and attested by its secretary, on the 31st day of January, 1911.

[Corporate Seal]

ALASKA GASTINEAU MINING COM-  
PANY,

By W. J. SUTHERLAND,  
President.

Attest: B. LIDDLE,  
Secretary.

STATE OF NEW YORK,  
COUNTY OF NEW YORK,—ss.

On this 31st day of January, 1911, before me personally came WILLIAM J. SUTHERLAND, to me known, who, being duly sworn, did depose and say that he resides in the City of London, England; that he is the President of the Alaska Gastineau Mining Company, the corporation described in and which executed the above instrument; that he knows the seal of said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the board of directors of said corporation, and that he signed his name thereto by like order.

[Notarial Seal] HENRY E. GOERLOCKE,  
Notary Public, New York County. [898]

(Endorsed:)

CERTIFICATE OF MERGER  
by the  
ALASKA GASTINEAU MINING COMPANY  
MERGING THE  
ALASKA-PERSEVERANCE MINING COM-  
PANY.

Filed and Recorded FEB. 1—1911.

EDWARD LAZANSKY,  
Secretary of State.

459A

STATE OF NEW YORK,  
Office of the Secretary of State,—ss.

I have compared the preceding with the original Certificate of Merger of Alaska-Perseverance Mining Company with the Alaska Gastineau Mining Company, filed and recorded in this office on the 1st day of February, 1911, and do HEREBY CERTIFY the same to be a correct transcript therefrom and of the whole thereof.

(SEAL)

WITNESS my hand and the seal of office of the Secretary of State, at the City of Albany, this eighth day of July, one thousand nine hundred and twelve.

JOSE E. PIDGEON,  
Second Deputy Secretary of State. [899]

**[Plaintiff's Exhibit No. 6.]**

A. G. Co. vs. A. T. G. M. Co., et al. Plffs. Ex. 6.  
R. E. R.

(COPY)

San Francisco, Cal., October 31, 1910.

Professor C. L. Cory,  
Union Trust Building.  
San Francisco.

My dear Professor:

The Alaska Treadwell and allied mining companies have leased a water power property to which they have added other property of their own and have since developed and equipped the whole with a generating plant and are now transmitting 2000 K. W. from this plant to their mines.

The lessor or owner of a portion of the water power property interprets the lease as follows:

“That he has the option to either take 300 electric horse power from and at our generating plant, or else to accept the sum of \$25,000.00 in complete payment for his property.”

The lessor construing the lease in this way, believes that the 300 electric horse power from and at the generating plant is of greater value than the sum of \$25,000.00. Assuming that the lessor has the right to take 300 electric horse power from and at the generating plant subject to all operating and physical conditions beyond our control, I wish your opinion as to the present cash value of the same under the following conditions:

First: The total cost of the above hydro-electric 2000 K. W. plant with electric power delivered at the

mines seven to eight months per year has amounted to \$50. per horse power.

Second: During the seven to eight months each year there is more than sufficient water to run the plant to full capacity. During the remaining four to five months there will not be enough water to make the full 300 electric horse power. That is, for at least four months each year, the plant may not [900] be able to average over 100 electric horse power—this is a physical cause beyond our control.

Third: We have built a 2000 K.W. steam electric relay plant at a capital cost of \$50.00 per horse power. With fuel oil delivered at 90¢ per barrel, we estimate that the total operating cost of this steam relay plant will not exceed \$35.00 per horse power per year.

Fourth: We are developing another water power which we own outright and will provide it with ample storage so as to have an all-the-year-round power. The capital cost of this plant delivering electric power at the mines twelve months per year will be about \$135.00 per horse-power.

Fifth: We will need power in addition to what all the foregoing installations will provide, but can secure it by slightly increasing the capacity of any of the above mentioned plants.

If the lessor is right in his contention that he can demand the 300 electric horse power at the generating plant and sell it to the highest bidder, what price in your opinion would we be justified in offering him for it? You must consider that if this 300 electric horse power is sold to any outsider, the outsider will



have to build his own transmission line four miles to the nearest market, the power will only be good eight months per year and his peak loads cannot exceed 300 electric horse power at the generating plant.

Yours very truly,

F. W. B. [901]





**[Defendants' Exhibit "A."]**

Alaska Gastineau Mining Co. v. Alaska Treadwell M. Co., et al. Defts. Ex. A. R. E. R.

THIS INDENTURE, made this 22nd day of April  
~~January~~, 1911, BETWEEN the Oxford Mining Company, a corporation, hereinafter called the party of the first part, and the Alaska Treadwell Gold Mining Company, a corporation, the Alaska Mexican Gold Mining Company, a corporation, and the Alaska United Gold Mining Company, a corporation, hereinafter called the parties of the second part, WITNESSETH;

THAT WHEREAS, on the 14th day of October, 1909, the parties of the first and second parts above mentioned, entered into an indenture and agreement in words and figures as follows, to wit:

THIS INDENTURE AND AGREEMENT made and entered into this 14th day of October, 1909, by and between OXFORD MINING COMPANY hereinafter called the lessor and the Alaska Treadwell Gold Mining Company, the Alaska Mexican Gold Mining Company and the Alaska United Gold Mining Company hereinafter called the lessees.

WITNESSETH,—First, the lessor has this date and does by these presents lease unto the lessees all of the following described real property situated on and near Sheep Creek in the Harris Mining District, District of Alaska, to wit:

The Mexico Mill-site U. S. Mineral Entry No. 25, lot 71B. The Bellvidere Mill-site U. S. Mineral

Entry No. 25, lot 72 B. The Jumbo Mill-site U. S. Mineral Entry No. 60, lot No. 260. Also that certain piece or parcel of land beginning at a stake identical with post No. 2 Jumbo Mill-site U. S. Survey No. 260 on the meander line of Gastineau Channel, thence first course along the meander line of Gastineau Channel at ordinary high water mark No. 52 00' W. 54 feet to stake No. 2; thence second course N. 48 15' E. 200 feet to stake No. 3; thence S. 52, 00' E. 54 feet to the N.W. side line of Jumbo Mill-site U. S. Survey No. 260 to stake No. 4; thence S. 46 15' W. along the [903] Northwest side line Jumbo Mill-site U. S. Survey No. 260, 200 feet to stake No. 1, the place of beginning containing an area of one quarter of an acre more or less courses expressed from the true meridian, Mag. Var. 20.30'; and also that certain water right known as the Sheep Creek Water Right and located on Sheep Creek about three quarters of a mile from its mouth, together with the flume and pipe line connecting the same with the beach near the mill at the mouth of the said Sheep Creek, also the sawmill, boarding house, lumber sheds, wharf landing, mill dam, flumes, penstocks, waterwheels, and all other machinery and appliances used in connection with said sawmill, situated near the mouth of said Sheep Creek, together with all machinery, tools, equipment, plants of every kind and description now upon said property for a term of ten (10) years from the date hereof at a monthly rental of One hundred and Twenty-five (\$125.00) Dollars per month, payable in gold coin of the United States on the first day of each month during the term of said lease at the



office of the said lessees at Treadwell, Alaska; and it is hereby agreed, that if any rent shall be due and unpaid, or if default shall be made in any of the covenants herein contained, that it shall be lawful for the lessor to re-enter said premises and remove all persons therefrom, and the lessees do hereby covenant, promise and agree to pay the lessor the said rent in the manner hereinbefore specified, and not to let or underlet the whole or any part of said premises

the  
without a written consent of the lessor, nor to assign this lease or any part thereof without said written consent, and at the expiration of said term the party of the second part will quit and surrender said premises in as good state and condition as the same now are. [904]

It is the intention of the Lessees to erect, equip and maintain upon said premises a water power plant of substantial size and efficiency for the generation of electric power, and if at any time after Two (2) years from the date hereof the lessors or its assigns shall elect to take a current of *not to exceed three hundred* (300) electric horse-power which shall be taken from and at the generating plant to be installed upon the leased premises hereinbefore described, the lessees undertake covenant and agree to deliver said current to the lessor or its assigns upon the execution and delivery by the lessor or its assigns to the lessee of a deed or deeds conveying said leased property herein described to the parties of the second part. If prior to the expiration of nine years from the date hereof the lessor does not elect to convey to lessees or their

assigns the property herein leased and accept in full consideration therefor the right to the use of the three hundred (300) electric horse-power hereinbefore mentioned, the lessees may at their option prior to the expiration of the ten (10) years provided in this lease purchase the property herein leased absolutely from the lessor by paying to the lessor the sum of Twenty-five Thousand Dollars (\$25,000.) in gold coin of the United States; and the lessor covenants and agrees upon tender of said sum of Twenty-five Thousand Dollars (\$25,000.) to execute and deliver such deeds of conveyance to the property herein leased as hereinbefore specified, excepting only as to the title to (1) the one quarter acre tract hereinbefore described and (2) the premises occupied and used by the existing wharf of the lessor to both of which the lessor now asserts only possessory titles. The lessees may at their own cost and expense undertake to perfect the said titles and should lessee wish so to [905] do the lessor shall lend all proper assistance in its power including the using of its name, and should the said titles be so perfected to the said premises or either of them they shall become the property of the lessor and remain covered by this lease and subject to all terms and conditions thereof.

The covenants herein contained shall be construed as running with the land and as a charge thereon, so, that any successor or successors in interest to the lessor and or lessees who may acquire any interest in and to the titles to the said land shall be bound by this conveyance in the same manner as if they had executed this agreement; and the lessees hereof may re-

quire at their option that the property herein described be conveyed by the lessor to a responsible Trustee for the purpose of carrying out the terms of this agreement, or that deeds and conveyances covering the property herein leased be placed in escrow so as to ensure delivery of the same if required under the provisions of any of the covenants of this lease.

If neither of the options herein provided for are accepted by either the lessor or lessees then the property and right herein described with all the improvements that are or that may hereafter be placed on the said premises shall be and become the property of the lessor.

The provisions herein as to the delivery of three hundred (300) horse-power at the generating plant to be installed on the premises herein described contemplates the delivery of an uninterrupted current, but the lessees shall not be liable for damages that may arise from operating and physical causes beyond its control. [906]

IN WITNESS WHEREOF the parties hereto have hereunto set their hands and seals the day and year first above written. (Executed in triplicate.)

Witness:

HAROLD LAWRENCE.

WALTER W. BLACK.

OXFORD MINING COMPANY.

By WALLACE HACKETT,

President.

And HENRY ENDICOTT,

Treasurer.

[Seal Oxford Gold Mining Company.]

ALASKA TREADWELL GOLD MINING  
COMPANY.

By H. H. TAYLOR,

President.

F. A. HAMMERSMITH,

Secretary.

ALASKA MEXICAN GOLD MINING  
COMPANY.

By H. H. TAYLOR,

President.

F. A. HAMMERSMITH,

Secretary.

ALASKA UNITED GOLD MINING COM-  
PANY,

By H. H. TAYLOR,

President.

F. A. HAMMERSMITH,

Secretary.

[Seal Alaska Treadwell Gold Mining Co.]

[Seal Alaska Mexican Gold Mining Co.]

[Seal Alaska United Gold Mining Co.]

COMMONWEALTH OF MASSACHUSETTS,  
COUNTY OF SUFFOLK,  
CITY OF BOSTON,—ss.

Be it remembered that on this 14th day of October, 1909, before me, the undersigned, a Notary Public, in and for said County and State, personally appeared Wallace Hackett, President, and Henry Endicott, Treasurer, of the Oxford Mining Company, a corporation, organized under the laws of the State of Maine, to me known to be the individuals described in and who executed the foregoing *going* instrument

as such President and Treasurer; and said Henry [907] Endicott having affixed the seal of said Corporation to said instrument, they severally acknowledged to me that he, Wallace Hackett, as President, and he, Henry Endicott, as Treasurer of said Corporation executed the foregoing instrument for and on behalf of said Corporation, as the free and voluntary act of said Corporation for the uses and purposes therein set forth. Then the said Henry Endicott, being by me first duly sworn, on his oath states that he is the Treasurer of Said Corporation, is acquainted and is the custodian, and has in his possession the corporate seal of said Corporation and that the seal hereinbefore affixed is the corporate seal of said Corporation and was affixed by him as such Treasurer by order of the Board of Directors of said Corporation.

In Witness Whereof, I have hereunto set my hand and seal the date and year first above written.

[Notarial Seal]

(Signed) LLOYD A. FROST,  
Notary Public.

My commission expires Dec. 5th, 1913.

STATE OF CALIFORNIA,  
CITY AND COUNTY OF SAN FRANCISCO,—ss.

On this 12th day of November, in the year one thousand nine hundred and nine, before me, P. J. Kennedy, a Notary Public, in and for said City and County, residing therein, duly commissioned and sworn, personally appeared H. H. Taylor, and F. A. Hammersmith, known to me to be the President and Secretary respectively, of Alaska Mexican Gold Min-



ing Company and Alaska United Gold Mining Company, the corporations that executed the within and foregoing instrument, and to be the officers who executed the said instrument on behalf of said Corporations therein named, and they acknowledged to me that such corporations executed the same. [908]

IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal at my office in the said City and County of San Francisco, the day and year last above written.

[Notarial Seal]

(Signed) P. J. KENNEDY,  
Notary Public in and for the City and County of San Francisco, State of California.

STATE OF CALIFORNIA,  
CITY AND COUNTY OF SAN FRANCISCO,—ss.

On this 12th day of November, in the year One Thousand nine Hundred and Nine, before me, P. J. Kennedy, a Notary Public, in and for said City and County, residing therein, duly commissioned and sworn, personally appeared H. H. Taylor, and F. A. Hammersmith, known to me to be the President and Secretary, respectively, of Alaska Treadwell Gold Mining Company, the Corporation that executed the within and foregoing instrument, and to be the officers who executed the said instrument on behalf of said Corporation therein named, and they acknowledge to me, that such Corporation executed the same.

IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal at my office in said City and County of San Francisco, the day and

year last above written.

[Notarial Seal]

(Signed) P. J. KENNEDY,  
Notary Public in and for the City and County of San  
Francisco, State of California. [909]

CERTIFIED COPY OF RESOLUTION PASSED  
BY THE BOARD OF DIRECTORS OF  
ALASKA TREADWELL GOLD MINING  
COMPANY.

“Resolved, that the proposed lease, dated October 14th, 1909, of certain real property particularly therein described and situated on and near Sheep Creek in the Harris Mining District, Alaska, made by and between Oxford Mining Company and Alaska Treadwell Gold Mining Company, Alaska Mexican Gold Mining Company and Alaska United Gold Mining Company, be and the same is hereby approved and accepted, and the President and Secretary are hereby authorized and directed, in the name of the Company and as its act and deed and under its corporate seal, to execute and deliver said lease to Oxford Mining Company.”

CERTIFICATE OF SECRETARY.

I, F. A. Hammersmith, hereby certify that I am the Secretary of Alaska Treadwell Gold Mining Company; that the foregoing Resolution is a full, true and correct copy of a Resolution duly passed and adopted by the Board of Directors of said Company at a meeting held on the 11th day of November, 1909, as the same is now recorded in the minutes of the meeting of said Board of Directors.

In Witness Whereof I have hereunto set my hand

1002 *Alaska Treadwell Gold Mining Co. et al.*

as such Secretary and affixed the corporate seal of said Company, this 11th day of November, 1909.

[Corporate Seal]

(Signed) F. A. HAMMERSMITH,  
Secretary of Alaska Treadwell Gold Mining Com-  
pany.

CERTIFIED COPY OF RESOLUTION PASSED  
BY THE [910] BOARD OF DIRECTORS  
OF ALASKA MEXICAN GOLD MINING  
COMPANY.

“Resolved that the proposed lease dated October 14th, 1909, of certain real property particularly therein described and situated on and near Sheep Creek in the Harris Mining District, Alaska, made by and between Oxford Mining Company and Alaska Treadwell Gold Mining Company, Alaska Mexican Gold Mining Company and Alaska United Gold Mining Company, be, and the same is hereby approved and accepted, and the President and Secretary are hereby authorized and directed, in the name of the Company and as its act and deed and under its corporate seal, to execute and deliver said lease to Oxford Mining Company.”

CERTIFICATE OF SECRETARY.

I, F. A. Hammersmith, hereby certify that I am the Secretary of Alaska Mexican Gold Mining Company; that the foregoing Resolution is a full, true and correct copy of a Resolution duly passed and adopted by the Board of Directors of said Company at a meeting held on the 11th day of November, 1909, as the same is now recorded on the minutes of the meeting of said Board of Directors.

In Witness Whereof I have hereunto set my hand as such Secretary and affixed the corporate seal of said Company, this 11th day of November, 1909.

[Corporate Seal]

(Signed) F. A. HAMMERSMITH,  
Secretary of Alaska Mexican Gold Mining Company.

CERTIFIED COPY OF RESOLUTION PASSED  
BY THE BOARD OF DIRECTORS OF  
ALASKA UNITED GOLD MINING COM-  
PANY.

“Resolved that the proposed lease, dated October 14th, 1909, of certain real property particularly therein described and situated on and near Sheep Creek in the Harris Mining District, [911] Alaska, made by and between Oxford Mining Company and Alaska Treadwell Gold Mining Company, Alaska Mexican Gold Mining Company and Alaska United Gold Mining Company, be and the same is hereby approved and accepted and the President and Secretary are hereby authorized and directed, in the name of the company and as its act and deed and under its corporate seal, to execute and deliver said lease to Oxford Mining Company.”

CERTIFICATE OF SECRETARY.

I, F. A. Hammersmith, hereby certify that I am the Secretary of Alaska United Gold Mining Company; that the foregoing Resolution is a full, true and correct copy of a Resolution duly passed and adopted by the Board of Directors of said Company at a meeting held on the 11th day of November, 1909, as the same is now recorded on the minutes of the

meeting of said Board of Directors.

In Witness Whereof I have hereunto set my hand as such Secretary and affixed the corporate seal of said Company, this 11th day of November, 1909.

[Corporate Seal]

(Signed) F. A. HAMMERSMITH,  
Secretary of Alaska United Gold Mining Company.

COMMONWEALTH OF MASSACHUSETTS,  
COUNTY OF SUFFOLK,  
CITY OF BOSTON,—ss.

WHEREAS the International Trust Company, a corporation, has reserved unto itself for the benefit of itself and various persons therein interested a lien upon the property described in the foregoing lease for the sum of \$36,375 to secure the costs, advances, and charges in connection with the foreclosure of certain trust deeds upon certain property in the District of Alaska, a part of which is described in the [912] foregoing instrument.

NOW, THEREFORE, THIS INSTRUMENT WITNESSETH That in consideration of the covenants contained in the foregoing agreement said International Trust Company for the purpose of binding the interest so held upon said property by said lien, assents, agrees and ratifies the execution of the foregoing lease with the Alaska-Treadwell Gold Mining Company et al., Party of the Second Part, and agrees to substitute said lien upon any contract or contracts which may be made pursuant to the options contained in the said lease, so that the terms



and provisions of said contract may be carried out.  
Executed in triplicate.

Signed this 14th day of October, 1909.

INTERNATIONAL TRUST COMPANY.

By JNO. M. GRAHAM, Pres.,  
HENRY L. JEWETT, Sect.

[Corporate Seal]

Witnesses:

WALTER W. BLACK.  
HAROLD LAWRENCE.

COMMONWEALTH OF MASSACHUSETTS,  
COUNTY OF SUFFOLK,  
CITY OF BOSTON,—ss.

Be it remembered that on the 14th day of October, 1909, before me, the undersigned Notary Public, in and for said county and State, personally appeared John M. Graham, President, and Henry L. Jewett, Secretary of the International Trust Company, a corporation organized under the laws of the state of Massachusetts, to me known to be the individuals described in and who executed the foregoing instrument, as such President and Secretary for and on behalf of said International Trust Company as Trustee for the mortgage bondholders under said instrument described; the said Henry L. Jewett having affixed the seal of said corporation to said instrument and they severally acknowledged to me that he, John M. Graham as president, [913] and he, the said Henry L. Jewett, as Secretary of said Corporation, executed the foregoing instrument for and on behalf of said corporation as the free and voluntary act and deed of said corporation as Trustee for

the uses and purposes therein set forth.

Then the said Henry L. Jewett being by me first duly sworn on his oath states that he is the Secretary of said Corporation, is acquainted, is the custodian, and has in his possession the corporate seal of said corporation and that the seal hereinbefore affixed is the corporate seal of said corporation and was affixed by him as such Secretary by order of the Board of Directors of said Corporation.

IN WITNESS WHEREOF I have hereunto set my hand and official seal the day and year first above written.

[Notarial Seal]

(Signed) LLOYD A. FROST,  
Notary Public.

My commission expires Dec. 5th, 1913."

COMMONWEALTH OF MASSACHUSETTS,  
COUNTY OF SUFFOLK,  
CITY OF BOSTON,—ss.

WHEREAS the International Trust Company, a corporation, has reserved a lien upon the property described in the foregoing lease together with other property.

Now for the purpose of further securing said lien, the undersigned lessor in the foregoing instrument, by order of its Board of Directors, hereby assigns the rentals due or to become due under the foregoing lease to the International Trust Company to be applied, first upon the payment of interest on the \$15,000 item of compensation reserved in favor of said Trust Company at the rate of six per cent (6%) per annum—and second that the balance of said

moneys be applied [914] pro rata upon the other items described in said lien so reserved.

Dated this 14th day of October, 1909, at Boston, Mass.

(Signed) OXFORD MINING COMPANY.

By WALLACE HACKETT,

President.

Attest: HENRY ENDICOTT,

Secretary.

(This true copy of the foregoing lease was made December 12th, 1910, by W. S. Bayless.)

—which said agreement was duly filed for record at 1 o'clock P. M. on the 17th day of October, 1910, and duly recorded in Book 19 Miscellaneous, at page 2 of the records of the Juneau Recording District, wherein the property mentioned in said indenture and agreement is situated;

AND WHEREAS, on or about the 17th day of October, 1910, the parties of the second part had finished the erection and equipment upon the premises described in the said indenture and agreement of a water power plant of substantial size and efficiency pursuant to the provisions of said indenture and agreement and had expended in the erection and equipment of said water power plant a sum in excess of One Hundred Thousand (\$100,000) Dollars;

AND WHEREAS, the said water power plant was completed about one year sooner than contemplated in the said indenture and agreement of October 14, 1909, which allowed a period of two years from the date of said agreement for the erection of the said water power plant;

AND WHEREAS, thereafter on the 31st day of October, 1909, the Oxford Mining Company, party of the first part herein, [915] duly elected to take the electric current provided for in the said indenture and agreement, which said election was accepted and agreed to by the parties of the second part hereinbefore mentioned on the said 31st day of October, 1910;

NOW, THEREFORE, under and pursuant to the provisions of the indenture and agreement of October 14, 1909, and the election of the party of the first part of October 31, 1910, the party of the first part, for and in consideration of the provisions of the said indenture and agreement of October 14, 1909, and pursuant to its election of October 31st, 1910; and in further consideration of the sum of One Hundred Thousand (\$100,000) Dollars expended in the erection and equipment of a water power plant of sufficient size and efficiency for the generation of electric power by the parties of the second part hereto, receipt of all of which considerations as above set forth is hereby acknowledged by the party of the first part, does by these presents grant, bargain and sell unto the parties of the second part, and to their heirs, assigns and successors in interest, forever, all of that certain property described in the said indenture and agreement of October 14, 1909, hereinbefore set forth, lying and being situate on and near Sheep Creek in the Harris Mining District, District of Alaska.

TOGETHER with all the tenements, hereditaments and appurtenances thereunto belonging or ap-

pertaining, and the reversion and reversions, remainder and remainders, rents, issues and profits thereof, it being the intention of this instrument in conveying to comply in full with the undertaking on the part of the Oxford Mining Company made on the 14th day of October, 1909.

TO HAVE AND TO HOLD said premises together with the [916] appurtenances unto the said parties of the second part and to their heirs, assigns and successors in interest forever.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands and seals the day and year first above written.

OXFORD MINING COMPANY,

By WALLACE HACKETT,

President.

HENRY ENDICOTT,

Treasurer.

[Corporate Seal—Oxford Mining Company, Incorporated 1909, Maine.]

Signed, sealed and delivered in the presence of

LEWIS P. SHACKLEFORD.

L. W. LAWRENCE.

COMMONWEALTH OF MASSACHUSETTS,

COUNTY OF SUFFOLK,

CITY OF BOSTON,—ss.

It will be remembered that on the twenty-second day of April, 1911, before me, Alexander L. Pelkey, Notary Public in and for said State, County and City, personally appeared WALLACE HACKETT, president, and HENRY ENDICOTT, treasurer of



the Oxford Mining Company, a corporation organized under the laws of the State of Maine, known to me to be the individuals described in and who executed the foregoing instrument as said President and Treasurer, and the said HENRY ENDICOTT, having affixed the seal of said corporation to said instrument, they severally acknowledged to me that WALLACE HACKETT as President and HENRY ENDICOTT as Treasurer of the said corporation executed the foregoing instrument for and on behalf of said corporation to be the free and voluntary act of said corporation for the uses and purposes therein set forth. Then said HENRY ENDICOTT, being first duly sworn, on his oath states that he is the Treasurer of said corporation and he is acquainted with, is custodian of and has in his possession the corporate seal of said corporation, and that the seal herein [917] before affixed is the seal of said corporation and was affixed by him as said Treasurer by order of the Board of Directors of said corporation.

IN WITNESS WHEREOF I have herein set my hand and official seal the day and year first above written.

[Notarial Seal]     ALEXANDER L. PELKEY,  
Notary Public.

(Indorsed:) Deed. Oxford Mining Company to Alaska Treadwell Gold Mining Co., Alaska Mexican Gold Mining Co., Alaska United Gold Mining Co. Dated April 22nd, 1911. District of Alaska, Juneau,—ss. The within instrument was filed for record at 2.20 o'clock P. M., May 9, 1911, and duly re-

corded in book 22, Deeds, on page 546, of the records of said District. G. C. Winn, District Recorder.

(NOTE—By order of Court March 1, 1913, on introduction the foregoing paper as Defendants' Exhibit "A," it was ordered that the reporter should substitute in lieu of original deed a copy to be made by him, and return the original to the defendants. I hereby certify that the above and foregoing and hereto attached ——— pages constitute a full, true and correct copy of the original deed, of which they purport to be a copy, and that they have been compared by me with the original as the same was introduced in evidence.

R. E. ROBERTSON,  
Official Reporter.) [918]

BE IT FURTHER REMEMBERED that prior to the filing of the answer herein, the defendants filed their demurrer, which demurrer was overruled by the Court, to which ruling and order of the Court, defendants then and there excepted, which exception was then and there allowed by the Court. [919]

**[Findings Requested by Defendants, etc.]**

Thereupon the defendants requested the Court to make the following findings of fact: Finding of Fact No. II as requested by the defendants, which is in words and figures as follows, to wit:

**FINDING OF FACT No. II.**

The Court finds that certain and other and further negotiations were had between the Oxford Mining Company on the one hand, and the defendant companies on the other, which led to the execution be-

tween the parties of the following contract, which is in writing and is as follows: [920]

THIS INDENTURE, made this 22d day of April, 1911, BETWEEN the Oxford Mining Company, a corporation, hereinafter called the party of the first part, and the Alaska Treadwell Gold Mining Company, a corporation, the Alaska Mexican Gold Mining Company, a corporation, and the Alaska United Gold Mining company, a Corporation, hereinafter called the parties of the second part, WITNESSETH;

THAT WHEREAS, on the 14th day of October, 1909, the parties of the first and second parts above mentioned, entered into an indenture and agreement in words and figures as follows, to wit:

THIS INDENTURE AND AGREEMENT made and entered into this 14th day of October, 1909, by and between OXFORD MINING COMPANY hereinafter called the lessor and the Alaska Treadwell Gold Mining Company, the Alaska Mexican Gold Mining Company and the Alaska United Gold Mining Company hereinafter called the lessees.

WITNESSETH,—First, the lessor has this date and does by these presents lease unto the lessees all of the following described real property situated on and near Sheep Creek in the Harris Mining District, District of Alaska, to wit:

The Mexico Mill-site U. S. Mineral Entry No. 25, lot 71B. The Bellvidere Mill-site U. S. Mineral Entry No. 25, lot 72B. The Jumbo Mill-site U. S. Mineral Entry No. 60, lot No. 260. Also that certain piece or parcel of land beginning at a stake identical

with post No. 2 Jumbo Mill-site U. S. Survey No. 260 on the meander line of Gastineau Channel, thence first course along the meander line of Gastineau Channel at ordinary high water mark No. 52 00' W. 54 feet to stake No. 2; thence second course N. 48 15' E. 200 feet to stake No. 4; thence S. 52 [921] 00' E. 54 feet to the N.W. side line of Jumbo Mill-site U. S. Survey No. 260 to stake No. 4; thence S. 46 15' W. along the Northwest side line Jumbo Mill-site U. S. Survey No. 260, 200 feet to stake No. 1, the place of beginning containing an area of one quarter of an acre more or less courses expressed from the true meridian, Mag. Var. 29.30'; and also that certain water right known as the Sheep Creek Water Right and located on Sheep Creek about three quarters of a mile from its mouth, together with the flume and pipe-line connecting the same with the beach near the mill at the mouth of the said Sheep Creek, also the sawmill, boarding-house, lumber sheds, wharf landing, mill dam, flumes, penstocks, water-wheels, and all other machinery and appliances used in connection with said sawmill, situated near the mouth of said Sheep Creek, together with all machinery, tools, equipment, plants of every kind and description now upon said property for a term of ten (10) years from the date hereof at a monthly rental of One hundred and Twenty-five (\$125.00) Dollars per month, payable in gold coin of the United States on the first day of each month during the term of said lease at the office of the said lessees at Treadwell, Alaska; and it is hereby agreed, that if any rent shall be due and unpaid, or if default shall be made in any of the covenants herein contained,



that it shall be lawful for the lessor to re-enter said premises and remove all persons therefrom, and the lessees do hereby covenant, promise and agree to pay the lessor the said rent in the manner hereinbefore specified, and not to let or underlet the whole or any part of said premises without the written consent of the lessor, nor to assign this lease or any part thereof without said written consent, and at the expiration of said term the party of the second part will quit and surrender said premises in as good state and condition as the same now are. [922]

It is the intention of the Lessees to erect, equip and maintain upon said premises a water-power plant of substantial size and efficiency for the generation of electric power, and if at any time after Two (2) years from the date hereof the lessors or its assigns shall elect to take a current of *not to exceed three hundred* (300) electric horse-power which shall be taken from and at the generating plant to be installed upon the leased premises hereinbefore described, the lessees undertake covenant and agree to deliver said current to the lessor or its assigns upon the execution and delivery by the lessor or its assigns to the lessee of a deed or deeds conveying said leased property herein described to the parties of the second part. If prior to the expiration of nine years from the date hereof the lessor does not elect to convey to lessees or their assigns the property herein leased and accept in full consideration therefor the right to the use of the three hundred (300) electric horse-power hereinbefore mentioned, the lessees may at their option prior to the expiration of the ten (10)



years provided in this lease purchase the property herein leased absolutely from the lessor by paying to the lessor the sum of Twenty-five Thousand Dollars (\$25,000) in gold coin of the United States; and the lessor covenants and agrees upon tender of said sum of Twenty-five Thousand Dollars (\$25,000) to execute and deliver such deeds of conveyance to the property herein leased as hereinbefore specified, excepting only as to the title to (1) the one quarter acre tract hereinbefore described and (2) the premises occupied and used by the existing wharf of the lessor to both of which the lessor now asserts only possessory titles. The lessees may at their own cost and expense undertake to perfect the said titles and should lessee wish so to [923] do the lessor shall lend all proper assistance in its power including the using of its name, and should the said titles be so perfected to the said premises or either of them they shall become the property of the lessor and remain covered by this lease and subject to all terms and conditions thereof.

The covenants herein contained shall be construed as running with the land and as a charge thereon, so, that any successor or successors in interest to the lessor and or lessees who may acquire any interest in and to the title to the said land shall be bound by this conveyance in the same manner as if they had executed this agreement; and the lessees hereof may require at their option that the property herein described *by* conveyed by the lessor to a responsible Trustee for the purpose of carrying out the terms of this agreement, or that deeds and conveyances covering the property herein leased be placed in escrow

so as to ensure delivery of the same if required under the provisions of any of the covenants of this lease.

If neither of the options herein provided for are accepted by either the lessor or lessees then the property and rights herein described with all the improvements that are or that may hereafter be placed on the said premises shall be and become the property of the lessor.

The provisions herein as to the delivery of three hundred (300) horse-power at the generating plant to be installed on the premises herein described contemplates the delivery of an uninterrupted current, but the lessees shall not be liable for damages that may arise from operating and physical causes beyond its control. [924]

IN WITNESS WHEREOF the parties hereto have hereunto set their hands and seals, the day and year first above written. (Executed in triplicate.)

Witness:

HAROLD LAWRENCE.

WALTER W. BLACK.

OXFORD MINING COMPANY,

By WALLACE HACKETT,

President.

And HENRY ENDICOTT,

Treasurer.

[Seal Oxford Mining Company.]

*vs. Alaska Gastineau Mining Company.* 1017

ALASKA TREADWELL GOLD MINING  
COMPANY,

By H. H. TAYLOR,

President.

F. A. HAMMERSMITH,

Secretary.

ALASKA MEXICAN GOLD MINING  
COMPANY,

By H. H. TAYLOR,

President.

F. A. HAMMERSMITH,

Secretary.

ALASKA UNITED GOLD MINING COM-  
PANY,

By H. H. TAYLOR,

President.

F. A. HAMMERSMITH,

Secretary.

[Seal Alaska Treadwell Gold Mining Co.]

[Seal Alaska Mexican Gold Mining Co.]

[Seal Alaska United Gold Mining Co.]

COMMONWEALTH OF MASSACHUSETTS,  
COUNTY OF SUFFOLK,  
CITY OF BOSTON,—ss.

Be it remembered that on this 14th day of October, 1909, before me, the undersigned, a Notary Public, in and for said County and State, personally appeared Wallace Hackett, President, and Henry Endicott, Treasurer, of the Oxford Mining Company, a corporation organized under the laws of the State of Maine, to me known to be the individuals described in and who executed the foregoing instrument as such

President and Treasurer; and said Henry [925] Endicott having affixed the seal of said Corporation to said instrument, they severally acknowledged to me, that he, Wallace Hackett, as President, and he, Henry Endicott, as Treasurer of said Corporation executed the foregoing instrument for and on behalf of said Corporation, as the free and voluntary act of said Corporation for the uses and purposes therein set forth. Then the said Henry Endicott, being by me first duly sworn, on his oath states that he is the Treasurer of Said Corporation, is acquainted and is the custodian, and has in his possession the corporate seal of said Corporation and that the seal hereinbefore affixed is the corporate seal of said Corporation and was affixed by him as such Treasurer by order of the Board of Directors of said Corporation.

In Witness Whereof I have hereunto set my hand and seal the date and year first above written.

[Notarial Seal]

(Signed) LLOYD A. FROST,  
Notary Public.

My commission expires, Dec. 5th, 1913.

STATE OF CALIFORNIA,  
CITY AND COUNTY OF SAN FRANCISCO,—ss.

On this 12th day of November in the year one thousand nine hundred and nine, before me, P. J. Kennedy, a Notary Public, in and for said City and County, residing therein, duly commissioned and sworn, personally appeared H. H. Taylor and F. A. Hammersmith, known to me to be the President and Secretary respectively, of Alaska Mexican Gold Mining Company and Alaska United Gold Mining Com-

pany, the corporations that executed the within and foregoing instrument, and to be the officers who executed the said instrument on behalf of said Corporations therein named, and they acknowledged to me that such corporations executed the same. [926]

IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal at my office in the said City and County of San Francisco, the day and year last above written.

[Notarial Seal]

(Signed) P. J. KENNEDY,  
Notary Public in and for the City and County of  
San Francisco, State of California.

STATE OF CALIFORNIA,

CITY AND COUNTY OF SAN FRANCISCO,—ss.

On this 12th day of November in the year One Thousand nine hundred and Nine, before me, P. J. Kennedy, a Notary Public, in and for said City and County, residing therein, duly commissioned and sworn, personally appeared H. H. Taylor and F. A. Hammersmith, known to me to be the President and Secretary, respectively, of Alaska Treadwell Gold Mining Company, the Corporation that executed the within and foregoing instrument, and to be the officers who executed the said instrument on behalf of said Corporation therein named, and they acknowledged to me that such Corporation executed the same.

IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal at my office in said City and County of San Francisco, the day and



year last above written.

[Notarial Seal]

(Signed) P. J. KENNEDY,  
Notary Public, in and for the City and County of  
San Francisco, State of California. [927]

CERTIFIED COPY OF RESOLUTION PASSED  
BY THE BOARD OF DIRECTORS OF  
ALASKA TREADWELL GOLD MINING  
COMPANY.

“Resolved that the proposed lease, dated October 14th, 1909, of certain real property particularly therein described and situated on and near Sheep Creek in the Harris Mining District, Alaska, made by and between Oxford Mining Company and Alaska Treadwell Gold Mining Company, Alaska Mexican Gold Mining Company and Alaska United Gold Mining Company, be and the same is hereby approved and accepted, and the President and Secretary are hereby authorized and directed, in the name of the Company and as its act and deed and under its corporate seal, to execute and deliver said lease to Oxford Mining Company.”

CERTIFICATE OF SECRETARY.

I. F. A. Hammersmith, hereby certify that I am the Secretary of Alaska Treadwell Gold Mining Company; that the foregoing resolution is a full, true and correct copy of a Resolution duly passed and adopted by the Board of Directors of said Company at a meeting held on the 11th day of November, 1909, as the same is now recorded on the minutes of the meeting of said Board of Directors.

In Witness Whereof, I have hereunto set my hand

as such Secretary and affixed the corporate seal of said Company, this 11th day of November, 1909.

[Corporate Seal]

(Signed) F. A. HAMMERSMITH,  
Secretary of Alaska Treadwell Gold Mining Com-  
pany. [928]

CERTIFIED COPY OF RESOLUTION PASSED  
BY THE BOARD OF DIRECTORS OF  
ALASKA MEXICAN GOLD MINING COM-  
PANY.

“Resolved that the proposed lease dated October 14th, 1909, of certain real property particularly therein described and situated on and near Sheep Creek in the Harris Mining District, Alaska, made by and between Oxford Mining Company and Alaska Treadwell Gold Mining Company, Alaska Mexican Gold Mining Company and Alaska United Gold Mining Company, be, and the same is hereby approved and accepted, and the President and Secretary are hereby authorized and directed, in the name of the Company and as its act and deed and under its corporate seal, to execute and deliver said lease to Oxford Mining Company.”

CERTIFICATE OF SECRETARY.

I, F. A. Hammersmith, hereby certify that I am the Secretary of Alaska Mexican Gold Mining Company; that the foregoing resolution is a full, true and correct copy of a Resolution duly passed and adopted by the Board of Directors of said Company at a meeting held on the 11th day of November, 1909, as the same is now recorded on the minutes of the meeting

of said Board of Directors.

In Witness Whereof I have hereunto set my hand as such Secretary and affixed the corporate seal of said Company, this 11th day of November, 1909.

[Corporate Seal.]

(Signed) F. A. HAMMERSMITH,  
Secretary of Alaska Mexican Gold Mining Com-  
pany.

CERTIFIED COPY OF RESOLUTION PASSED  
BY THE BOARD OF DIRECTORS OF  
ALASKA UNITED GOLD MINING COM-  
PANY.

“Resolved that the proposed lease, dated October 14th, 1909, of certain real property particularly therein described and situated on and near Sheep Creek in the Harris Mining District, [929] Alaska, made by and between Oxford Mining Company and Alaska Treadwell Gold Mining Company, Alaska Mexican Gold Mining Company and Alaska United Gold Mining Company, be and the same is hereby approved and accepted and the President and Secretary are hereby authorized and directed, in the name of the company and as its act and deed and under its corporate seal, to execute and deliver said lease to Oxford Mining Company.”

CERTIFICATE OF SECRETARY.

I, F. A. Hammersmith, hereby certify that I am the Secretary of Alaska United Gold Mining Company; that the foregoing Resolution is a full, true and correct copy of a Resolution duly passed and adopted by the Board of Directors of said Company

at a meeting held on the 11th day of November, 1909, as the same is now, recorded on the minutes of the meeting of said Board of Directors.

In Witness Whereof I have hereunto set my hand as such Secretary and affixed the corporate seal of said Company, this 11th day of November, 1909.

[Corporate Seal]

(Signed) F. A. HAMMERSMITH,  
Secretary of Alaska United Gold Mining Company.

Commonwealth of Massachusetts,  
County of Suffolk,  
City of Boston,—ss.

WHEREAS the International Trust Company, a corporation, has reserved unto itself for the benefit of itself and various persons therein interested a lien upon the property described in the foregoing lease for the sum of \$36,376, to secure the costs, advances, and charges in connection with the foreclosure of certain trust deeds upon certain property in the District of Alaska, a part of which is described in the [930] foregoing instrument.

NOW, THEREFORE, THIS INSTRUMENT WITNESSETH that in consideration of the covenants contained in the foregoing agreement said International Trust Company for the purpose of binding the interest so held upon said property by said lien, assents, agrees and ratifies the execution of the foregoing lease with the Alaska-Treadwell Gold Mining Company et al., Party of the Second Part, and agrees to substitute said lien upon any contract or contracts which may be made pursuant to the

1024 *Alaska Treadwell Gold Mining Co. et al.*

options contained in the said lease, so that the terms and provisions of said contract may be carried out.

Executed in triplicate.

Signed this 14th day of October, 1909.

INTERNATIONAL TRUST COMPANY.

By JNO. M. GRAHAM,

Pres.,

[Corporate Seal]

HENRY L. JEWETT,

Sect.

Witnesses:

WALTER W. BLACK.

HAROLD LAWRENCE.

Commonwealth of Massachusetts,

County of Suffolk,

City of Boston,—ss.

Be it remembered that on the 14th day of October, 1909, before me, the undersigned Notary Public, in and for said county and State, personally appeared John M. Graham, ~~President~~, and Henry L. Jewett, Secretary of the International Trust Company, a corporation organized under the laws of the State of Massachusetts, to me known to be the individuals described in and who executed the foregoing instrument, as such President and Secretary for and on behalf of said International Trust Company as Trustee for the mortgage bondholders under said instrument described; the said Henry L. Jewett having affixed the seal of said corporation to said instrument and they severally acknowledged to me that he, John M. Graham as president, [931] and he, the said Henry L. Jewett, as Secretary of said corporation,



executed the foregoing instrument for and on behalf of said corporation as the free and voluntary act and deed of said corporation as Trustee for the uses and purposes therein set forth.

Then the said Henry L. Jewett, being by me first duly sworn on his oath states that he is the Secretary of said corporation, is acquainted, is the custodian, and has in his possession the corporate seal of said corporation and that the seal hereinbefore affixed is the corporate seal of said corporation and was affixed by him as such Secretary by order of the Board of Directors of said corporation.

IN WITNESS WHEREOF I have hereunto set my hand and official seal the day and year first above written.

[Notarial Seal]

(Signed) LLOYD A. FROST,  
Notary Public.

My commission expires Dec. 5th, 1913."

COMMONWEALTH OF MASSACHUSETTS,  
COUNTY OF SUFFOLK,  
CITY OF BOSTON,—ss.

WHEREAS, the International Trust Company, a corporation, has reserved a lien upon the property described in the foregoing lease together with other property.

Now for the purpose of further securing said lien, the undersigned lessor in the foregoing instrument, by order of its Board of Directors, hereby assigns the rentals due or to become due under the foregoing lease to the International Trust Company to be ap-

plied, first upon the payment of interest on the \$15,000, item of compensation reserved in favor of said Trust Company at the rate of six per cent (6%) per annum,—and second that the balance of said moneys be applied [932] pro rata upon the other items described in said lien so reserved.

Dated this 14th day of October, 1909, at Boston, Mass.

(Signed) OXFORD MINING COMPANY,  
By WALLACE HACKETT,  
President.  
Attest: HENRY ENDICOTT,  
Secretary.

—which said agreement was duly filed for record at 1 o'clock P. M. on the 17th day of October, 1910, and duly recorded in Book 19 Miscellaneous, at page 2 of the records of the Juneau Recording District, wherein the property mentioned in said indenture and agreement is situated;

AND WHEREAS, on or about the 17th day of October, 1910, the parties of the second part had finished the erection and equipment upon the premises described in the said indenture and agreement of a water-power plant of substantial size and efficiency pursuant to the provisions of said indenture and agreement and had expended in the erection and equipment of said water-power plant a sum in excess of One Hundred Thousand (\$100,000) Dollars;

AND WHEREAS, the said water-power plant was completed about one year sooner than contemplated in the said indenture and agreement of October 14, 1909, which allowed a period of two years from the

date of said agreement for the erection of the said water-power plant;

AND WHEREAS, thereafter on the 31st day of October, 1909, the Oxford Mining Company, party of the first part herein, [933] duly elected to take the electric current provided for in the said indenture and agreement, which said election was accepted and agreed to by the parties of the second part hereinbefore mentioned on the said 31st day of October, 1910;

NOW, THEREFORE, under and pursuant to the provisions of the indenture and agreement of October 14, 1909, and the election of the party of the first part of October 31, 1910, the party of the first part, for and in consideration of the provisions of the said indenture and agreement of October 14, 1909, and pursuant to its election of October 31st, 1910; and in further consideration of the sum of One Hundred Thousand (\$100,000) Dollars expended in the erection and equipment of a water-power plant of sufficient size and efficiency for the generation of electric power by the parties of the second part hereto, receipt of all of which considerations as above set forth is hereby acknowledged by the party of the first part, does by these presents grant, bargain and sell unto the parties of the second part, and to their heirs, assigns and successors in interest, forever, all of that certain property described in the said indenture and agreement of October 14, 1909, hereinbefore set forth, lying and being situate on and near Sheep Creek in the Harris Mining District, District of Alaska.

TOGETHER with all the tenements, hereditaments and appurtenances thereunto belonging or ap-

pertaining, and the reversion and reversions, remainder and remainders, rents, issues and profits thereof, it being the intention of this instrument in conveying to comply in full with the undertaking on the part of the Oxford Mining Company made on the 14th day of October, 1909.

TO HAVE AND TO HOLD SAID premises together with the [934] appurtenances unto the said parties of the second part and to their heirs, assigns and successors in interest forever.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands and seals the day and year first above written.

OXFORD MINING COMPANY.

By WALLACE HACKETT,

President.

HENRY ENDICOTT,

Treasurer.

[Corporate Seal—Oxford Mining Company, Incorporated 1909, Maine.]

Signed, sealed and delivered in the presence of

LEWIS P. SHACKLEFORD,

L. W. LAWRENCE.

COMMONWEALTH OF MASSACHUSETTS,  
COUNTY OF SUFFOLK,  
CITY OF BOSTON,—ss.

It will be remembered that on the twenty-second day of April, 1911, before me, Alexander L. Pelkey, Notary Public in and for said State, County and City, personally appeared WALLACE HACKETT, president, and HENRY ENDICOTT, treasurer of

the Oxford Mining Company, a corporation organized under the laws of the State of Maine, known to me to be the individuals described in and who executed the foregoing instrument as said President and Treasurer, and the said HENRY ENDICOTT, having affixed the seal of said corporation to said instrument, they severally acknowledged to me that WALLACE HACKETT as President and HENRY ENDICOTT as Treasurer of the said corporation executed the foregoing instrument for and on behalf of said corporation to be the free and voluntary act of said corporation for the uses and purposes therein set forth. Then said HENRY ENDICOTT, being first duly sworn, on his oath states that he is the Treasurer of said corporation and he is acquainted with, is custodian of and has in his possession the corporate seal of said corporation, and that the seal hereinbefore [935] affixed is the seal of said corporation and was affixed by him as said Treasurer by order of the Board of Directors of said corporation.

IN WITNESS WHEREOF I have herein set my hand and official seal the day and year first above written.

[Notarial Seal] ALEXANDER L. PELKEY,  
Notary Public.

Above finding is this 12th day of June, 1913, made by the Court.

PETER D. OVERFIELD,  
Judge. [936]

Which said Finding No. II was thereupon made and adopted by the Court as a Finding of the Court and the signature of the Judge appended thereto on



the 12th day of June, 1913, by Peter D. Overfield.  
[937]

Thereupon the defendants requested the Court to make Finding No. III as requested by the defendants, which is in words and figures as follows:

FINDING OF FACT No. III.

The Court further finds that certain negotiations were had between the Oxford Mining Company on the one hand, and the defendant companies on the other, which led to the execution of the following contract, which is in writing and reads as follows:  
[938]

THIS AGREEMENT, made this 22nd day of April, 1911, BETWEEN the Oxford Mining Company, a corporation, the party of the first part, and the Alaska Treadwell Gold Mining Company, a corporation, the Alaska Mexican Gold Mining Company, a corporation, and the Alaska United Gold Mining Company, a corporation, parties of the second part, WITNESSETH:

THAT WHEREAS, on the 14th day of October, 1909, the parties hereto, entered into an indenture and agreement in words and figures as follows, towit:

THIS INDENTURE AND AGREEMENT made and entered into this 14th day of October, 1909, by and between OXFORD MINING COMPANY hereinafter called the lessor and the Alaska Treadwell Gold Mining Company, the Alaska Mexican Gold Mining Company and the Alaska United Gold Mining Company hereinafter called the lessees.

WITNESSETH,—First, the lessor has this date and does by these presents lease unto the lessees all

of the following described real property situated on and near Sheep Creek in the Harris Mining District, District of Alaska, towit:

The Mexico Mill-site U. S. Mineral Entry No. 25, lot 71B. The Bellvidere Mill-site U. S. Mineral Entry No. 25, Lot 72B. The Jumbo Mill-site U. S. Mineral Entry No. 60, lot No. 260. Also that certain piece or parcel of land beginning at a stake identical with post No. 2 Jumbo Mill-site U. S. Survey No. 260 on the meander line of Gastineau Channel, thence first course along the meander line of Gastineau Channel at ordinary high water mark N. 52 00' W. 54 feet to stake No. 2; thence second course N. 48 15' N. 200 feet to stake No. 3; thence S. 52. [939] 00' E. 54 feet to the N. W. side line of Jumbo Mill-site U. S. Survey No. 260 to stake No. 4; thence S. 46 15' W. along the Northwest side line Jumbo Mill-site U. S. Survey No. 260, 200 feet to stake No. 1, the place of beginning containing an area of one quarter of an acre more or less courses expressed from the true meridian, Mag. Var. 29.30'; and also that certain water right known as the Sheep Creek Water Right and located on Sheep Creek about three quarters of a mile from its mouth, together with the flume and pipe line connecting the same with the beach near the mill at the mouth of the said Sheep Creek, also the sawmill, boarding house, lumber sheds, wharf landing, mill dam, flumes, penstocks, waterwheels, and all other machinery and appliances used in connection with said sawmill, situated near the mouth of said Sheep Creek, together with all machinery, tools, equipment, plants of every kind

and description now upon said property for a term of ten (10) years from the date hereof at a monthly rental of One hundred and Twenty-five (\$125.00) Dollars per month, payable in gold coin of the United States on the first day of each month during the term of said lease at the office of the lessees at Treadwell, Alaska; and it is hereby agreed, that if any rent shall be due and unpaid, or if default shall be made in any of the covenants herein contained, that it shall be lawful for the lessor to re-enter said premises and remove all persons therefrom, and the lessees do hereby covenant, promise and agree to pay the lessor the said rent in the manner hereinbefore specified, and not to let or underlet the whole or any part of said premises without the written consent of the lessor, nor to assign this lease or any part thereof without said written consent, and at the expiration of said term the party of the second part will quit and surrender said premises in as good state and condition as the same now are. [940]

It is the intention of the Lessees to erect, equip and maintain upon said premises a water power plant of substantial size and efficiency for the generation of electric power, and if at any time after Two (2) years from the date hereof the lessor or its assigns shall elect to take a current of *not to exceed three hundred* (300) electric horse-power which shall be taken from and at the generating plant to be installed upon the leased premises hereinbefore described, the lessees undertake covenant and agree to deliver said current to the lessor or its assigns upon the execution and delivery by the lessor or its as-

signs to the lessee of a deed or deeds conveying said leased property herein described to the party of the second part. If prior to the expiration of nine years from the date hereof the lessor does not elect to convey to lessees or their assigns the property herein leased and accept in full consideration therefor the right to the use of the three hundred (300) electric horse power hereinbefore mentioned, the lessees may at their option prior to the expiration of the ten (10) years provided in this lease purchase the property herein leased absolutely from the lessor by paying to the lessor the sum of Twenty-five Thousand Dollars (\$25,000) in gold coin of the United States; and the lessor covenants and agrees upon tender of said sum of Twenty-five Thousand Dollars (\$25,000.) to execute and deliver such deeds of conveyance to the property herein leased as hereinbefore specified, excepting only as to the title to (1) the one quarter acre tract hereinbefore described and (2) the premises occupied and used by the existing wharf of the lessor to both of which the lessor now asserts only possessory titles. The lessees may at their own cost and expense undertake to perfect the said titles and should lessee wish so to [941] do the lessor shall lend all proper assistance in its power including the using of its name, and should the said titles be so perfected to the said premises or either of them they shall become the property of the lessor and remain covered by this lease and subject to all terms and conditions thereof.

The covenants herein contained shall be construed as running with the land and as a charge thereon,



so that any successor or successors in interest to the lessor and or lessees who may acquire any interest in and to the titles to the said land shall be bound by this conveyance in the same manner as if they had executed this agreement; and the lessees hereof may require at their option that the property herein described by conveyed by the lessor to a responsible Trustee for the purpose of carrying out the terms of this agreement, or that deeds and conveyances covering the property herein leased by placed in escrow so as to ensure delivery of the same if required under the provisions of any of the covenants of this lease.

If neither of the options herein provided for are accepted by either the lessor or lessees then the property and rights herein described with all the improvements that are or that may hereafter be placed on the said premises shall be and become the property of the lessor.

The provisions herein as to the delivery of three hundred (300) horse-power at the generating plant to be installed on the premises herein described contemplates the delivery of an uninterrupted current, but the lessees shall not be liable for damages that may arise from operating and physical causes beyond its control. [942]

IN WITNESS WHEREOF the parties hereto have hereunto set their hands and seals the day and year first above written.

(Executed in triplicate.)

Witness:

HAROLD LAWRENCE.

WALTER W. BLACK.



OXFORD MINING COMPANY.

By WALLACE HACKETT,  
President,  
And HENRY ENDICOTT,  
Treasurer,

[Seal Oxford Mining Company.]

ALASKA TREADWELL GOLD MINING  
COMPANY.

By H. H. TAYLOR,  
President,  
F. A. HAMMERSMITH,  
Secretary.

ALASKA MEXICAN GOLD MINING  
COMPANY.

By H. H. TAYLOR,  
President,  
F. A. HAMMERSMITH,  
Secretary.

ALASKA UNITED GOLD MINING COM-  
PANY.

By H. H. TAYLOR,  
President.  
F. A. HAMMERSMITH,  
Secretary.

[Seal Alaska Treadwell Gold Mining Company.]

[Seal Alaska Mexican Gold Mining Company.]

[Seal Alaska United Gold Mining Company.]

COMMONWEALTH OF MASSACHUSETTS,  
COUNTY OF SUFFOLK,  
CITY OF BOSTON,—ss.

Be it remembered that on this 14th day of October, 1909, before me, the undersigned, a Notary Public, in and for said County and State, personally appeared Wallace Hackett, President, and Henry Endicott, Treasurer, of the Oxford Mining Company, a corporation organized under the laws of the State of Maine, to me known to be the individuals described in and who executed the foregoing instrument as such President and such Treasurer; and said Henry [943] Endicott having affixed the seal of said Corporation to said instrument, they severally acknowledged to me that he, Wallace Hackett, as President, and he, Henry Endicott, as Treasurer of said Corporation executed the foregoing instrument for and on behalf of said Corporation, as the free and voluntary act of said Corporation for the uses and purposes therein set forth. Then the said Henry Endicott, by me being first duly sworn, on his oath states that he is the Treasurer of said Corporation, is acquainted and is the custodian, and has in his possession the corporate seal of said Corporation and that the seal hereinbefore affixed is the corporate seal of said Corporation and was affixed by him as such Treasurer by order of the Board of Directors of said Corporation.

In Witness Whereof I have hereunto set my hand and seal the date and year first above written.

[Notarial Seal]

(Signed) LLOYD A. FROST,  
Notary Public.

My commission expires Dec. 5th, 1913.

STATE OF CALIFORNIA,  
CITY AND COUNTY OF SAN FRANCISCO,—ss.

On this 12th day of November in the year one thousand nine hundred and nine, before me, P. J. Kennedy, a Notary Public, in and for said City and County, residing therein, duly commissioned and sworn, personally appeared H. H. Taylor and F. A. Hammersmith, known to me to be the President and Secretary respectively, of Alaska Mexican Gold Mining Company and Alaska United Gold Mining Company, the corporations that executed the within and foregoing instrument, and to be the officers who executed the said instrument on behalf of said Corporations therein named, and they acknowledged to me that such corporations executed the same. [944]

IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal at my office in the said City and County of San Francisco, the day and year last above written.

[Notarial Seal]

(Signed) P. J. KENNEDY,  
Notary Public in and for the City and County of  
San Francisco, State of California.

STATE OF CALIFORNIA,  
CITY AND COUNTY OF SAN FRANCISCO,—ss.

On this 12th day of November in the year One

Thousand Nine Hundred and Nine, before me, P. J. Kennedy, a Notary Public, in and for said City and County, residing therein, duly commissioned and sworn, personally appeared H. H. Taylor and F. A. Hammersmith, known to me to be the President and Secretary, respectively, of Alaska Treadwell Gold Mining Company, the Corporation that executed the within and foregoing instrument, and to be the officers who executed the said instrument on behalf of said Corporation therein named, and they acknowledged to, me that such Corporation executed the same.

IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal at my office in the said City and County of San Francisco, the day and year last above written.

[Notarial Seal]

(Signed) P. J. KENNEDY,  
Notary Public in and for the City and County of  
San Francisco, State of California. [945]

CERTIFIED COPY OF RESOLUTION PASSED  
BY THE BOARD OF DIRECTORS OF  
ALASKA TREADWELL GOLD MINING  
COMPANY.

“Resolved that the proposed lease, dated October 14th, 1909, of certain real property particularly therein described and situated on and near Sheep Creek in the Harris Mining District, Alaska, made by and between Oxford Mining Company and Alaska Treadwell Gold Mining Company, Alaska Mexican Gold Mining Company and Alaska United Gold Mining Company, be and the same is hereby

approved and accepted, and the President and Secretary are hereby authorized and directed, in the name of the Company and as its act and deed and under its corporate seal, to execute and deliver said lease to Oxford Mining Company.”

### CERTIFICATE OF SECRETARY.

I, F. A. Hammersmith, hereby certify that I am the Secretary of Alaska Treadwell Gold Mining Company; that the foregoing resolution is a full, true and correct copy of a resolution duly passed and adopted by the Board of Directors of said Company at a meeting held on the 11th day of November, 1909, as the same is now recorded on the minutes of the meeting of said Board of Directors.

In Witness Whereof I have hereunto set my hand as such Secretary and affixed the corporate seal of said Company, this 11th day of November, 1909.

[Corporate Seal]

(Signed) F. A. HAMMERSMITH,  
Secretary of Alaska Treadwell Gold Mining Company. [946]

### CERTIFIED COPY OF RESOLUTION PASSED BY THE BOARD OF DIRECTORS OF ALASKA MEXICAN GOLD MINING COM- PANY.

“Resolved that the proposed lease dated October 14th, 1909, of certain real property particularly therein described and situated on and near Sheep Creek in the Harris Mining District, Alaska, made by and between Oxford Mining Company and Alaska Treadwell Gold Mining Company, Alaska Mexican Gold Mining Company and Alaska United Gold Min-



ing Company, be, and the same is hereby approved and accepted, and the President and Secretary are hereby authorized and directed, in the name of the Company and as its act and deed and under its corporate seal, to execute and deliver said lease to Oxford Mining Company.”

#### CERTIFICATE OF SECRETARY.

I, F. A. Hammersmith, hereby certify that I am the Secretary of Alaska Mexican Gold Mining Company; that the foregoing resolution is a full, true and correct copy of a Resolution duly passed and adopted by the Board of Directors of said Company at a meeting held on the 11th day of November, 1909, as the same is now recorded on the minutes of the meeting of said Board of Directors.

In Witness Whereof I have hereunto set my hand as such Secretary and affixed the corporate seal of said Company, this 11th day of November, 1909.

[Corporate Seal]

(Signed) F. A. HAMMERSMITH,  
Secretary of Alaska Mexican Gold Mining Company.

#### CERTIFIED COPY OF RESOLUTION PASSED BY THE BOARD OF DIRECTORS OF ALASKA UNITED GOLD MINING COMPANY.

“Resolved that the proposed lease, dated October 14th, 1909, of certain real property particularly therein described and situated on and near Sheep Creek in the Harris Mining District, [947] Alaska, made by and between Oxford Mining Company and Alaska Treadwell Gold Mining Company,

Alaska Mexican Gold Mining Company and Alaska United Gold Mining Company, be and the same is hereby approved and accepted and the President and Secretary are hereby authorized and directed, in the name of the company and as its act and deed and under its corporate seal, to execute and deliver said lease to Oxford Mining Company."

#### CERTIFICATE OF SECRETARY.

I, F. A. Hammersmith, hereby certify that I am the Secretary of Alaska United Gold Mining Company; that the foregoing Resolution is a full, true and correct copy of a Resolution duly passed and adopted by the Board of Directors of said Company at a meeting held on the 11th day of November, 1909, as the same is now, recorded on the minutes of the meeting of said Board of Directors.

In Witness Whereof I have hereunto set my hand as such Secretary and affixed the corporate seal of said Company, this 11th day of November, 1909.

(Corporate Seal)

(Signed) F. A. HAMMERSMITH,  
Secretary of Alaska United Gold Mining Company.  
COMMONWEALTH OF MASSACHUSETTS,  
COUNTY OF SUFFOLK,  
CITY OF BOSTON,—ss.

WHEREAS the International Trust Company, a corporation, has reserved unto itself for the benefit of itself and various persons therein interested a lien upon the property described in the foregoing lease for the sum of \$36,376, to secure the costs, advances, and charges in connection with the foreclosure of certain trust deeds upon certain property in

the District of Alaska, a part of which is described in the [948] foregoing instrument.

NOW, THEREFORE, THIS INSTRUMENT WITNESSETH That in consideration of the covenants contained in the foregoing agreement said International Trust Company for the purpose of binding the interest so held upon said property by said lien, assents, agrees and ratifies the execution of the foregoing lease with the Alaska-Treadwell Gold Mining Company et al., Party of the Second Part, and agrees to substitute said lien upon any contract or contracts which may be made pursuant to the options contained in the said lease, so that the terms and provisions of said contract may be carried out.

Executed in triplicate.

Signed this 14th day of October, 1909.

INTERNATIONAL TRUST COMPANY.

By JNO. M. GRAHAM, Pres.

[Corporate Seal]

HENRY L. JEWETT, Sect.

Witnesses:

WALTER W. BLACK.

HAROLD LAWRENCE.

Commonwealth of Massachusetts,

County of Suffolk,

City of Boston,—ss.

Be it remembered that on the 14th day of October, 1909, before me, the undersigned Notary Public, in and for said county and State, personally appeared John M. Graham, and Henry L. Jewett, Secretary of the International Trust Company, a corporation

organized under the laws of the state of Massachusetts, to me known to be the individuals described in and who executed the foregoing instrument, as such President and Secretary for and on behalf of said International Trust Company as Trustee for the mortgage bondholders under said instrument described; the said Henry L. Jewett having affixed the seal of said corporation to said instrument and they severally acknowledged to me that he, John M. Graham as president, [949] and he, the said Henry L. Jewett, as Secretary of said Corporation, executed the foregoing instrument for and on behalf of said corporation as the free and voluntary act and deed of said corporation as Trustee for the uses and purposes therein set forth.

Then the said Henry L. Jewett being by me first duly sworn on his oath states that he is the Secretary of said Corporation, is acquainted, is the custodian, and has in his possession the corporate seal of said corporation and that the seal hereinbefore affixed is the corporate seal of said corporation and was affixed by him as such Secretary by order of the Board of Directors of said Corporation.

IN WITNESS WHEREOF I have hereunto set my hand and official seal the day and year first above written.

[Notarial Seal]

(Signed) LLOYD A. FROST,  
Notary Public.

My commission expires Dec. 5th, 1913."

COMMONWEALTH OF MASSACHUSETTS,  
COUNTY OF SUFFOLK,  
CITY OF BOSTON,—ss.

WHEREAS the International Trust Company a corporation has reserved a lien upon the property described in the foregoing lease together with other property.

Now for the purpose of further securing said lien, the undersigned lessor in the foregoing instrument, by order of its Board of Directors, hereby assigns the rentals due or to become due under the foregoing lease to the International Trust Company to be applied, first upon the payment of interest of the \$15,000. item of compensation reserved in favor of said Trust Company at the rate of six per cent (6%) per annum, and second that the balance of said moneys be applied [950] pro rata upon the other items described in said lien so reserved.

Dated this 14th day of October, 1909, at Boston, Mass.

(Signed) OXFORD MINING COMPANY.  
By WALLACE HACKETT,  
President.

Attest: HENRY ENDICOTT,  
Secretary. [951]

AND WHEREAS, thereafter on the 31st day of October, 1910, the water-power plant provided for in the fourth paragraph of said agreement was duly erected and equipped prior to that time, and the party of the first part duly elected to take the current of electric power provided for in said indenture and agreement of October 14, 1909, which said elec-



tion was agreed and consented to by the parties of the second part;

AND WHEREAS, thereafter in the month of January, 1911, a certain instrument purported to have been executed by Joseph T. Gilbert, party of the first part, and Alaska Perseverance Mining Company, a corporation, party of the second part, was spread on the records of the Juneau Mining District, and is in words and figures following, to wit:

THIS INDENTURE made this 3rd day of December, 1910, between Joseph T. Gilbert, of Gilbertsville, Otaega County, State of New York, party of the first part, and the Alaska Perseverance Mining Company, a corporation organized and existing under the laws of the State of New York, *partly* of the second part; WITNESSETH:

That the said party of the first part for and in consideration of One Dollar and other good and valuable consideration, the receipt whereof is hereby acknowledged, does by these presents grant, bargain, sell, remise, release, convey and confirm to the said party of the second part, his successors and assigns the property described in the following agreement.

THIS AGREEMENT made and entered into this seventeenth day of June, A. D. 1897, by and between Joseph T. Gilbert, of the City of Milwaukee, State of Wisconsin, party of the one part, and the Nowell Gold Mining Company, a corporation organized under the laws of the State of Maine, and doing business in the District of Alaska, the party of the other part.

## WITNESSETH:

That whereas the said Joseph T. Gilbert has sold by deed given June 16, 1897, to the said Nowell Gold Mining Company, a certain mill-site, water rights, saw-mill, and appliances, situate at Sheep Creek in the Harris Mining District, District of Alaska, for the sum of Twenty-five Thousand (\$25,000.) dollars, and other good and valuable considerations hereinafter specifically set forth.

Now therefore, it is understood by and between the parties hereto that in case the said Joseph T. Gilbert, his heirs or assigns, should at any time desire to develop by tunnel, or otherwise, or to operate any of the property, formerly owned by the Juneau Mining and Manufacturing Company, that he and they shall have the right and preference to take and use any surplus water not required by the said Nowell Gold Mining Company for use in [952] operating their own properties at Sheep Creek and in Silver Bow Basin in said District; that he or they may draw the surplus water from any point of flumes or pipe lines belong to said Company, providing that it may be done without expense to the said Nowell Gold Mining Company, and that it shall not interfere with the operations of the properties, or the business of said Company; it is further understood and agreed that the said Nowell Gold Mining Company shall have the right and privilege to sell or dispose of any power to other parties arising from said surplus water when the same shall not be needed or required by the said Joseph T. Gilbert, his heirs, or assigns, in operating any plant that may be erected by him, his heirs or assigns, in working

or developing his properties acquired from the Juneau Mining and Manufacturing Company. It is further hereby stipulated and agreed by and between the parties hereto, that in case of sale by the Nowell Gold Mining Company of its mines, mills, millsites, and water rights, or any part of same, situated at Sheep Creek and in Silver Bow Basin, in the District aforesaid, to any person, persons, or corporations, that the said Nowell Gold Mining Company shall not have the right to dispose the said water right hereby acquired from the said Joseph T. Gilbert, to any person persons or corporations, other than for the purpose of operating the property held and owned by the said Nowell Gold Mining Company at Sheep Creek in the District aforesaid, at the time of said sale, provided that said Joseph T. Gilbert shall require the use of said water or the power generated thereby.

It is further understood and agreed by the parties hereto that the said Joseph T. Gilbert, his heirs or assigns shall be entitled to use for millsite or power purposes a frontage of not more than four hundred (400) feet commencing at post number two (2) of that certain piece or parcel of land formerly held and owned by one Kittie Richardson, adjoining the Jumbo Mill-site and extending thence along the beach in a southeasterly direction four hundred feet and extending back from the beach three hundred thirty-one and four-tenths ( $331\frac{4}{10}$ ) feet.

It is further understood and agreed by and between the parties hereto that the said Joseph T. Gilbert, his heirs or assigns shall have a right of way

over and upon the land of said Nowell Gold Mining Company situate in the vicinity of Sheep Creek, District of Alaska, and that the said Nowell Gold Mining Company shall have a right of way over and upon the premises comprising four hundred (400) feet in length by three hundred thirty-one and four-tenths ( $331\frac{4}{10}$ ) feet reserved by the said Joseph T. Gilbert as herein set forth.

It is further understood and agreed by and between the parties hereto that the said Joseph T. Gilbert shall have the use and benefit as well as the possession of that certain saw-mill known as the Sheep Creek saw-mill and situate near the mouth of Sheep Creek up to and until January 1, 1900, and that he shall have for the purpose of operating and running said mill all the water necessary from said Sheep Creek flume and pipe-line to operate said mill; or in the event of electric power to replace said water, then the said Nowell Gold Mining Company shall furnish, free of cost to the said Joseph T. Gilbert, all the power necessary to operate the said mill.

It is further understood and agreed by and between the parties hereto that that certain building and machinery thereto used as a dry house, situate near the saw-mill, is the property of William T. Iliff, and is no way effected by the sale from the said Gilbert to the said Nowell Gold Mining Company. It is further understood and agreed by and between the parties hereto that in [953] case the said saw-mill shall be destroyed by fire that neither party shall be held responsible, one to the other. It is



mutually understood and agreed by and between the parties that the water and ground privileges in favor of the said Joseph T. Gilbert are an essential and integral part of this contract and that the Nowell Gold Mining Company obligates itself and assigns to aid and assist without expense to itself in every way possible the said Joseph T. Gilbert to the use of such privileges.

IN WITNESS WHEREOF the said Joseph T. Gilbert has hereunto set his hand and seal this twenty-third day of June, A. D. 1897, and the said Nowell Gold Mining Company by its president and by authority of the Board of Directors of said Company has set the seal of its President this 17th day of June, A. D. 1897.

JOSEPH T. GILBERT,  
NOWELL GOLD MINING COMPANY.

By THOMAS S. NOWELL, Its Pres.

In Presence of:

J. J. MALONY.

JOHN R. WINN.

M. H. LATIMER.

E. F. CASSEL.

The above agreement is endorsed as follows:

DISTRICT OF ALASKA,  
JUNEAU,—ss.

The within instrument was filed for record at 2:30 o'clock P. M. June 27th, 1899, and duly recorded in Book 15 of Deeds, etc., on page 472 of the records of this district.

Sgn.—NORMAN E. MALCOLM,  
District Recorder,



For a full and accurate description of the property conveyed by the said party of the first part to the said party of the second part, the above agreement made between Joseph T. Gilbert and the Nowell Gold Mining Company is here quoted for the purpose of fully describing the property conveyed in this agreement made between the party of the first part and the party of the second part.

IN WITNESS WHEREOF, the party of the first part has hereunto set his hand and seal this 3d day of December, 1910.

JOSEPH T. GILBERT.

Signed, sealed and delivered in presence of

F. H. DONALDSON.

Now therefore pursuant to the agreement of the parties hereto of October 31, 1910, and the election of the party of the first part to take the electric current provided for in the agreement of October 14, 1909, formal conveyance of the said property has been made by the Oxford Mining Company to the parties of the second part;

NOW, THEREFORE, in consideration of the premises, it is hereby agreed that if the parties of the second part hereto are deprived at any time by Alaska Perseverance Mining Company, Joseph T. Gilbert his or their successors or assigns, of any of the water now appropriated and used by the second parties out of Sheep Creek at their power plant, then the party of the first part shall only be entitled to the three hundred (300) horse-power of electric current provided in the agreement dated October 14th, 1909, decreased by the number of horse-power

that could be [954] generated by the second parties at their plant with the water which the second parties may have been deprived by Alaska Perseverance Mining Company, Joseph T. Gilbert, his or their successors or assigns.

IN WITNESS WHEREOF, the party of the first part has hereunto set its hand and seal the day and year first above written.

OXFORD MINING COMPANY.

By WALLACE HACKETT,

President.

HENRY ENDICOTT,

Treasurer.

Signed, sealed and delivered in the presence of

LEWIS P. SHACKLEFORD.

L. W. LATTIMORE.

The above and foregoing finding was made by the Court this 12th day of June, 1913.

PETER D. OVERFIELD,

Judge. [955]

This finding was made and adopted by the Court this 12th day of June, 1913.

PETER D. OVERFIELD,

Judge.

Which said finding was requested by the defendant was then and there made and adopted by the Court as a Finding of the Court, and the signature of the Judge appended thereto. [956]

Thereupon the defendants requested the Court to make Finding No. IV, as requested by the defendants, which said finding so requested is in words and figures as follows: [957]

## FINDING OF FACT No. IV.

The Court finds that under and pursuant to the agreements, contracts and arrangements made between the parties and elsewhere referred to in these findings, the defendant corporations had constructed and did construct at Sheep Creek in the Territory of Alaska, an electric power plant of the capacity of approximately 2,600 horse-power, which said power plant was constructed and completed within the time agreed upon and in the manner agreed upon in full compliance with the agreements herein elsewhere referred to; that at a time after the construction of said plant and prior to the commencement of this action demand was made upon the defendant companies to furnish a current agreed to be furnished to the Oxford Company, which said demand was made by the plaintiff herein, and the plaintiff then and there also notified the defendant companies that it had succeeded to the rights of the Oxford Company in that behalf; and that the rights of said Oxford Company had been assigned to the plaintiff company; that immediately upon demand having been made in that behalf steps were taken to connect the transmission lines of the plaintiff company with the bus-bars *of at* the power plant of the defendant companies, and that from that time on including the time when this action was commenced the defendant companies made available for the use of the plaintiff company and permitted the plaintiff company to take from its bus-bars at its said power plant an electric current of approximately 60 amperes with a voltage of 2,300 impressed.

Above finding refused as already found and exception allowed.

PETER D. OVERFIELD,  
Judge. [958]

That the defendants by counsel duly and regularly excepted to the refusal and failure of the Court to find the facts set up in said Finding No. IV above referred to, which exception was then and there allowed by the Court. [959]

The Court refused to make said finding or adopt the same for the reason, among others, that the substance thereof was included within a finding which the Court himself had prepared; to the refusal of the Court in so finding said finding No. IV requested by defendants, the defendants by counsel then and there excepts, which exception was then and there allowed by the Court. [960]

Thereupon the defendants then requested the Court to make and adopt as its finding Finding No. V, requested by the defendants, which is in words and figures as follows: [961]

#### FINDING OF FACT No. V.

The Court further finds that 300 horse-power can be developed from an electric current of 56.2 amperes with a voltage of 2300 impressed.

Above finding refused this 13 day of June, 1913, and exception allowed defendants to such refusal.

PETER D. OVERFIELD,  
Judge.

[962]

To which failure of the Court to so find the facts so stated in Finding No. V and the refusal to make

said finding, the defendants by counsel duly excepted, which exception was then and there allowed by the Court. [963]

Which finding so requested was refused by the Court for the reason, among others, that the substance thereof was embraced in findings previously prepared by the Court, to which order and ruling of the Court the defendants by counsel then and there excepted, which exception was then and there allowed by the Court. [964]

Thereupon the Court made and entered its findings in addition to the two findings above referred to as having been made and entered by the Court, which are in words and figures as follows: [965]

### [Findings.]

#### FINDING OF FACT No. I.

That the plaintiff is a corporation duly organized and existing and formerly known as the Alaska Perseverance Mining Company and now known and existing under the name of the Alaska Gastineau Mining Company.

#### FINDING OF FACT No. II.

That the defendants above named are corporations duly organized and existing except the defendant Robert A. Kinzie, and that the said Robert A. Kinzie is superintendent of each of the defendant corporations above named. [966]

#### FINDING III.

That on and prior to the month of August, 1909, the International Trust Company was a corporation and in possession and control for the benefit of its



bondholders of a certain water-power plant at the mouth of Sheep Creek near Juneau, in the District of Alaska, which said water-power plant is more fully described in the agreement between the Oxford Mining Company, a corporation, and the defendant corporations, above named, dated October 14, 1909, which is hereinafter set forth. That the said water-power plant at and prior to said time had an installed generating equipment of 370 horse-power, and that the said water-power plant had been used for the purpose of furnishing power to what is known as the Sheep Creek Mines, which was claimed by the International Trust Company and its bondholders and that the operation of the said mine required not less than 260 actual horse-power in uninterrupted use for its continuous operation, exclusive of any additional surges of power necessary to start the operation of the said mine and mining machinery therein installed.

And which said finding was made by the Court over the objection of the defendants that the same was contrary to the evidence, not supported by the evidence, and the finding was not within the issues in that the evidence did not show that the International Trust Company was possessed at the time referred to, or any other time, of the water-power plant, in said finding referred to, nor that said water-power plant or any water-power plant, owned by said International Trust Company was possessed of a generating capacity or equipment of 370 horse-power, nor did the evidence show that the said International Trust Company or its bondholders claimed,

at that time, or any other time, the Sheep Creek Mines, nor did the evidence prove or tend to prove that said mine required not less than 260 actual horse-power [967] for the operation, but the evidence on the contrary conclusively shows that said mine could be operated with 150 horse-power. And said finding in the whole and every part thereof relates to matters that are immaterial in this case, in that the rights of the parties depend upon a certain contract which is in writing and must rest and be determined by the terms of that contract which cannot be varied or modified by extrinsic facts, circumstances or agreements. All of which objections were by the Court overruled, and to such ruling and order of the Court counsel for defendants then and there excepted, which exception was allowed by the Court. [968]

#### FINDING IV.

That prior to the month of August, 1909, the said power plant had actually been used by the International Trust Company and its predecessors in interest for the purpose of and in connection with the generation of power for the operation of the said Sheep Creek mines which said mines were provided with railways, trams, compressors, lighting plant, two rock crushers, one 30-stamp mill, two hoists and other ordinary appliances used in connection with the operation of a mine.

Defendants objected to the making of Finding No. IV on the ground that it was contrary to the evidence, not supported by sufficient evidence, and not within the issues, more expressly so for the reasons follow-

ing, that the rights of the parties depend upon the construction and terms of a certain written contract sued upon, and that all the matters and things referred to in the finding are immaterial and outside of the issues, in that the said contract or contracts cannot be varied, modified or explained by extrinsic facts, which said objection and each of them were then and there overruled by the Court, to which ruling and order of the Court defendants by counsel then and there excepted, which exception was then and there allowed by the Court. [969]

#### FINDING V.

That on and prior to August, 1909, the International Trust Company was not only in possession and control of the said Sheep Creek power plant, but was also in possession and control of mines near Juneau, Alaska, known as Silver Bow Basin Mines, including the Ground Hog group of mines, and also claimed equitable title to the Sheep Creek group of mines before mentioned, which said latter group the said power plant had theretofore been used to operate.

That the defendants object to making of said Finding No. V on the ground that it was contrary to the evidence and not supported by sufficient evidence and that the finding was not within the issue, for the special reason, among others, that the rights of the parties must be determined in accordance with a written contract sued upon which cannot be varied, modified or explained by extrinsic facts or circumstances, or by any of the matters or things related to in said findings, which objection was then and there overruled by the Court, to which order and ruling of the

Court defendants by counsel then and there excepted, which exception was then and there allowed by the Court. [970]

#### FINDING VI.

That in the month of August, 1909, F. W. Bradley approached L. P. Shackelford, the attorney for the International Trust Company and also attorney for the defendant companies herein, and stated that it was the desire of the defendant corporations to secure possession and control of the said Sheep Creek Power plant and construct upon the mill sites, upon which said power plant was situated, a water-power plant of substantial size and efficiency of a producing capacity of about 3,000 horse-power, and that it was the desire of the defendant corporation upon the construction of such power plant to provide that the said International Trust Company or its successors have sufficient power to operate the mines claimed by the International Trust Company known as the Sheep Creek mines and accept in exchange a deed for the Sheep Creek power plant. That at said time the said F. W. Bradley was consulting engineer of the defendant companies and had full charge of their operations, constructions and development with full authority to represent the said companies and with him at that time was H. H. Taylor, the then president of the defendant companies, who concurred in the representations of said F. W. Bradley. That the said F. W. Bradley at said time represented that an uninterrupted current of 200 horse-power continuously at the disposition of the said International Trust Company, or its assigns, would operate the



Sheep Creek mines and that said statement referred to the ordinary electric load necessary to the operation of the mines and the mining machinery appurtenant thereto, and did not include an estimate of the amount of power momentarily necessary to start machinery that would uninterruptedly consume or use 200 horse-power. That thereupon a draft of a contract between the defendants herein [971] and a company to be organized by the International Trust Company was drawn at Juneau, Alaska, upon the dictation and approval of the said F. W. Bradley and the defendant companies for presentation to the International Trust Company and its bondholders, which said draft was in words and figures identical with the contract of October 14, 1909, between the Oxford Mining Company and the defendant companies, hereinafter set forth, except that where the words "three hundred horse-power" appear in the body of the said contract of October 14, 1909, the words "two hundred horse-power" originally appeared in the body of said contract, and that after the said draft of the said contract had been made said F. W. Bradley wrote a letter to Henry Endicott, the principal bondholder interested in the said power plant in words and figures as follows, to-wit:

"Treadwell, Alaska, August 10, 1909.

Henry Endicott, Esq.,  
101 Tremont Street,  
Boston, Mass.

Dear Sir:

We have been talking to Mr. L. P. Shackleford about your water right on Sheep Creek in this dis-



trict and both *me* and ourselves have agreed upon what we consider an extremely fair proposition our concession have been drawn up in the shape of a document which Mr. Shackleford will present to you as it is now this sheep creek water power is in jeopardy and can be taken at any time by adverse interests our proposed arrangement will preserve your rights while at the same time developing them and making the most use of them. I presume you are holding this water right for the value that it has had and may have in the future for working the sheep creek mines and thirty stamp mill connected therewith estimating conservatively 150 HP is all the power these mines and mills ever required for thier past operations. The mill is amply large enough for the mine and surely two hundred H. P. will more than take care of future requirements if the proposition is all acceptable to you we would begin immediate work thereby preserving your rights and returning you some monthly income the proposition provides amply time in which you could decide either to sell the property outright or take two hundred H. P. for the operation of the mines and mill, yours very truly,

F. W. BRADLEY."

At the request of said F. W. Bradley the said L. P. Shackleford departed for Boston to present the said draft of agreement [972] to the said Henry Endicott and the International Trust Company.

Defendants objected to making of said Finding No. VI, on the ground that it is contrary to the evidence, not supported by sufficient evidence, and that finding was not within the issues, for the following reason,

among others, that the contract sued upon is in writing, that the negotiations, agreements and understandings had between the parties prior to its execution are immaterial, that the terms of the contract cannot be varied, explained or modified by extrinsic evidence or by facts or circumstances referred to in the Court's findings, all of which objections were then and there overruled by the Court, to which order and ruling of the Court defendants by counsel then and there excepted, which exception was then and there allowed by the Court. [973]

#### FINDING No. VII.

That upon the presentation of the said draft of agreement by the said L. P. Shackleford, the parties interested in the said power plant made an investigation as to the amount of power actually needed by them in continuous operation, exclusive of the amount necessary for any momentary starting surges for their machinery, which matter of surges was not discussed between the parties to the contract, and ascertained that they would need the continuous use of 300 horse-power and accordingly the said Henry Endicott sent to the said F. W. Bradley the following telegram:

“Boston, August 23, 1909.

F. W. Bradley,

Wardner, Idaho.

Will lease power on terms proposed subject to consent trust company if three hundred horse power is substituted for two hundred.

HENRY ENDICOTT.”

and received in reply thereto from the said F. W. Bradley the following telegram:

“Henry Endicott:

You may substitute three hundred for two hundred horse power may I cable Sup’t Kinzie to begin immediate protection measure.

F. W. BRADLEY.”

Thereafter the said International Trust Company and the bondholders beneficially interested in the said property transferred the said property to the said Oxford Mining Company and caused the said Oxford Mining Company to make and execute an agreement with the defendants, above named, which said agreement was also made and executed by the defendants, which said agreement was and is in the following words and figures, to wit: [974]

THIS INDENTURE AND AGREEMENT made and entered into this 14th day of October, 1909, by and between OXFORD MINING COMPANY hereinafter called the lessor and the Alaska Treadwell Gold Mining Company, the Alaska Mexican Gold Mining Company and the Alaska United Gold Mining Company hereinafter called the lessees.

WITNESSETH,—First, the lessor has this date and does by these presents lease unto the lessees all of the following described real property situated on and near Sheep Creek in the Harris Mining District, District of Alaska to wit:

The Mexico Mill-site U. S. Mineral Entry No. 25, lot 71B. The Bellvidere Mill-site U. S. Mineral Entry No. 25, lot 72B. The Jumbo Mill-site U. S. Mineral Entry No. 60, lot No. 260. Also that certain

piece or parcel of land beginning at a stake identical with post No. 2 Jumbo Mill-site U. S. Survey No. 260 on the meander line of Gastineau Channel, thence first course along the meander line of Gastineau Channel at ordinary high water mark N. 52.00' W. 54 feet to stake No. 2; thence second course N. 48° 15' E. 200 feet to stake No. 3; thence S. 52.00' E. 54 feet to the N. W. side line of Jumbo Mill-site U. S. Survey No. 260 to stake No. 4; thence S. 46 15' West along the Northwest side line Jumbo Mill-site U. S. Survey No. 260, 200 feet to stake No. 1, the place of beginning containing an area of one-quarter of an acre more or less courses expressed from the true meridian, Mag. Var. 29.30'; and also that certain water right known as the Sheep Creek Water Right and located on Sheep Creek about three-quarters of a mile from its mouth together with the flume and pipe-line connecting the same with the beach near the mill at the mouth of the said Sheep Creek, also the saw-mill, penstocks, waterwheels, and all other machinery and appliances used in connection with said saw-mill, situated near the mouth of said Sheep Creek, together with all machinery, tools, equipment, plants of every kind and description now upon said property for a term of ten (10) years from the date hereof at a monthly [975] rental of One Hundred and Twenty-five (\$125.00) dollars per month, payable in gold coin of the United States on the first day of each month during the term of said lease at the office of the lessees at Treadwell, Alaska; and it is hereby agreed, that if any rent shall be due and unpaid, or if default shall be made in any of the cove-

nants herein contained, that it shall be lawful for the lessor to re-enter said premises and remove all persons therefrom, and the lessees do hereby covenant, promise and agree to pay the lessor the said rent in the manner hereinbefore specified, and not to let or underlet the whole or any part of said premises without a written consent of the lessor, nor to assign this lease or any part thereof without said written consent, and at the expiration of said terms the party of the second part will quit and surrender said premises in as good state and condition as the same now are.

It is the intention of the Lessees to erect, equip and maintain upon said premises a water-power plant of substantial size and efficiency for the generation of electric power, and if at any time after two (2) years from the date hereof the lessor or its assigns shall elect to take a current of not to exceed three hundred (300) electric horse-power which shall be taken from and at the generating plant to be installed upon the leased premises hereinbefore described, the lessees undertake, covenant and agree to deliver said current to the lessor or its assigns upon the execution and delivery by the lessor or its assigns to the lessee of a deed or deeds conveying said leased property herein described to the party of the second part. If prior to the expiration of nine years from the date hereof the lessor does not elect to convey to lessees or their assigns the property herein leased and accept in full consideration therefor the right to the use of the three hundred (300) electric horse-power hereinbefore mentioned, the lessees may at their option prior



to the expiration of the ten (10) years provided in this lease purchase the property leased absolutely from [976] the lessor by paying to the lessor the sum of Twenty-five Thousand dollars (25,000.) in gold coin of the United States; and the lessor covenants and agreed upon tender of said sum of Twenty-five Thousand Dollars (\$25,000.) to execute and deliver such deeds of conveyance to the property herein leased as hereinbefore specified, excepting only as to the title to (1) the one-quarter acre tract hereinbefore described and (2) the premises occupied and used by the existing wharf to the lessor to both of which the lessor now asserts only possessory titles. The lessees may at their own cost and expense undertake to perfect the said titles and should lessee wish so to do the lessor shall lend all proper assistance in its power including the using of its name, and should the said titles be so perfected to the said premises or either of them they shall become the property of the lessor and remain covered by this lease and subject to all terms and conditions thereof.

The covenants herein contained shall be construed as running with the land and as a charge thereon, so, that any successor or successors in interest to the lessor and or lessees who may acquire any interest in and to the titles to the said land shall be bound by this conveyance in the same manner as if they had executed this agreement; and the lessess hereof may require at their option that the property herein described be conveyed by the lessor to a responsible Trustee for the purpose of carrying *at* the terms of this agreement, or that deeds and conveyances cover-

ing the property herein leased be placed in escrow so as to insure delivery of the same if required under the provisions of any of the covenants of this lease.

If neither of the options herein provided for are accepted by either the lessor or lessees then the property and rights herein described with all the improvements that are or that may hereafter be placed on the said premises shall be and become the property of the lessor. [977]

The provisions herein as to the delivery of three hundred (300) horse-power at the generating plant to be installed on the premises herein described contemplates the delivery of an uninterrupted current, but the lessees shall not be liable for damages that may arise from operating and physical causes beyond its control.

IN WITNESS WHEREOF the parties hereto have hereunto set their hands and seals the day and year first above written. (Executed in triplicate.)

Witness:

HAROLD LAWRENCE,  
WALTER W. BLACK.

OXFORD MINING COMPANY.

By WALLACE HACKETT,  
President.

And HENRY ENDICOTT,  
Treasurer.

[Seal Oxford Mining Company]

*vs. Alaska Gastineau Mining Company.* 1067

ALASKA TREADWELL GOLD MINING  
COMPANY.

By H. H. TAYLOR,

President.

F. A. HAMMERSMITH,

Secretary.

ALASKA MEXICAN GOLD MINING COM-  
PANY.

By H. H. TAYLOR,

President.

F. A. HAMMERSMITH,

Secretary.

ALASKA UNITED GOLD MINING COM-  
PANY.

By H. H. TAYLOR,

President.

F. A. HAMMERSMITH,

Secretary.

[Seal Alaska Treadwell Gold Mining Company]

[Seal Alaska Mexican Gold Mining Company]

[Seal Alaska United Gold Mining Company]

Commonwealth of Massachusetts,

County of Suffolk,

City of Boston,—ss.

Be it remembered that on this 14th day of Oc-  
tober, 1909, before me, the undersigned, a Notary  
Public, in and for said County and State, personally  
appeared Wallace Hackett, President, and Henry  
Endicott, Treasurer, of the Oxford Mining Company,  
a corporation organized [978] under the laws of  
the State of Maine, to me known to be the individ-  
uals described in and who executed the foregoing

instrument as such President and Treasurer; and said Henry Endicott having affixed the seal of said Corporation to said instrument they severally acknowledged to me that he, Wallace Hackett, as President, and he Henry Endicott, as Treasurer of said Corporation executed the foregoing instrument for and on behalf of said Corporation, as the free and voluntary act of said Corporation for the uses and purpose therein set forth. Then the said Henry Endicott, being by me first duly sworn, on his oath states that he is the Treasurer of said Corporation, is acquainted and is the custodian, and has in his possession the corporate seal of said Corporation and that the seal hereinbefore affixed is the corporate seal of said Corporation and was affixed by him as such Treasurer by order of the Board of Directors of said Corporation.

In Witness Whereof I have hereunto set my hand and seal the date and year first above written.

[Notorial Seal]

(Signed) LLOYD A. FROST,

Notary Public.

My commission expires Dec. 5th, 1913.

State of California,

City and County of San Francisco,—ss.

On this 12th day of November in the year one thousand nine hundred and nine, before, me, P. J. Kennedy, a Notary Public, in and for said City and County, residing therein, duly commissioned and sworn, personally appeared H. H. Taylor, and F. A. Hammersmith, known to me to be the President and

Secretary respectively of Alaska Mexican Gold Mining Company and Alaska United Gold Mining Company, the corporations that executed the within and foregoing instrument and to be the officers who executed the said instrument on behalf of said corporations therein named, and they acknowledged to me that such corporations executed the same.

IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal at my office in the said City and County of San Francisco, the day and year last above written.

[Notarial Seal]

(Signed) P. J. KENNEDY,

Notary Public in and for the City and County of San Francisco, State of California.

State of California,

City and County of San Francisco,—ss.

On this 12th day of November, in the year One Thousand Nine Hundred and Nine, before me, P. J. Kennedy, a Notary Public, in and for said City and County, residing therein, duly commissioned and sworn, personally appeared H. H. Taylor and F. A. Hammersmith, known to me to be the President and Secretary, respectively, of Alaska Treadwell Gold Mining Company, the Corporation that executed the within and foregoing instrument, and to be the officers who executed the said instrument on behalf of said Corporation therein named, and they acknowledged to me that such Corporation executed the same.

IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal at my office in



said City and County of San Francisco, the day and year last above written.

[Notarial Seal]

(Signed) P. J. KENNEDY,  
Notary Public in and for the City and County of San  
Francisco, State of California. [979]

And the Court finds from the surrounding circumstances that it was the intention of the said Oxford Mining Company and of the defendant companies to provide to the said Oxford Mining Company the beneficial and uninterrupted use of 300 actual horse-power, including such starting surges and other conditions which would reasonably insure to the said Oxford Mining Company and its successors the right to use 300 actual horse-power in connection with the ordinary machinery used in mining and the ordinary forms of induction motors in common use in mining for loads of 300 horse-power or less. The Court further finds that for loads of 300 horse-power or less induction motors having an inherent phase displacement and power factor less than unity were in ordinary and practical use in mining, and that the use of said ordinary and practical machinery in mining operations was contemplated by the defendants at the time of the execution of the contract, and that the power contracted for was 300 actual horse-power as distinguished from 300 apparent horse-power, and that the contract contemplated the practical and beneficial use of 300 actual horse-power as ordinarily spoken of and ordinarily measured by common and ordinary instruments for the measurements of horse-power. The Court further finds that

the common and ordinary instrument and device in universal use for the measurement of horse-power was and is the wattmeter, which measures actual as distinguished from apparent power.

The Court further finds that in making the said contract the said Oxford Mining Company relied, and had a right to rely, upon the representations made by the said defendant companies to the effect that it was the purpose of defendant companies to furnish the amount of power stipulated in the contract in real, actual and practical working efficiency, together with such momentary surges necessary to start the [980] machinery of the Oxford Company, or its successors, now to give to the Oxford Company or its successor the uninterrupted use of 300 real horse-power to be used in connection with ordinary motors commonly used upon loads of 300 horse-power or less, including induction motors.

Defendants objected to making of said finding No. VII on the ground that it is contrary to the evidence, not supported by sufficient evidence, and that the finding was not within the issue, more expressly for the following reason, and in the following particulars; that that portion of the finding preceding the contract as set up in said finding is immaterial and not within the issue of the case, for the reason that the contract between the parties was in writing and could not be varied, explained or modified by the extrinsic facts or circumstances referred to in the finding, all of such matters having merged in the contract itself. And that portion of the finding which follows the contract as set out therein is more ex-

pressly objected to for the reasons following, that the Court finds from the surrounding circumstances that it was the intention of the parties to provide the Oxford Mining Company with the beneficial and uninterrupted use of the 300 actual horse-power, including such starting surges and which would reasonably insure to the said Oxford Mining Company and its successors the right to use 300 actual horse-power in connection with the ordinary machinery used in mining and the ordinary forms of induction motors in common use in mining for loads of 300 horse-power or less. In this portion of the finding the Court finds what the intention of the parties was not from the contract itself but from the surrounding circumstances, and, in effect, makes between the parties a contract different from that which they had themselves made in [981] writing. The Court then finds that certain forms of induction motors having an inherent phase displacement and a power factor less than unity were in common use and were contemplated by the defendants at the time of the execution of the contract. This portion of the finding is also immaterial and not based upon any evidence whatsoever. The Court then finds that the power contracted for was 300 actual horse-power as distinguished from 300 apparent horse-power, and that the contract contemplated the practical and beneficial use of 300 actual horse-power as measured by wattmeter. This portion of the finding is objectionable, more expressly in this, that if it is based upon a construction of the contract itself, the contract is erroneous; if based upon evidence outside

of the contract it is immaterial, since the contract cannot be varied, explained or modified by such evidence, and, in any event, the same is not supported by any evidence in the case. The Court then proceeds to find that the Oxford Mining Company had a right to rely upon the representations made by the defendant companies to the effect that it was the purpose of the defendant companies to furnish the amount of power stipulated in the contract in real, actual and practical working efficiency, together with such momentary surges necessary to start the machinery of the Oxford Company or its successors, the uninterrupted use of 300 real horse-power to be used in connection with ordinary motors commonly used upon loads of 300 horse-power or less, including induction motors. The objection to this portion of the finding is more especially that there is no evidence upon which to base it, no such representations having been made. Further, that the Court speaks for itself as to what is to be furnished, and that if the finding is intended as a construction of the contract itself, it is erroneous in that the contract provides [982] for the furnishing of a current of not to exceed 300 horse-power, and does not provide for the delivery of power at all, and that if said finding is not based upon the contract itself but upon extrinsic evidence, then the same is immaterial and not within the issue in the case, for the reason that the terms of the written contract sued upon cannot be varied, modified or explained by intrinsic facts or evidence, and the relief of the parties, if any, might be measured by the terms of that contract it-



self. Each and all of which said objections were overruled by the Court, to which ruling and order of the Court counsel for the defendants then and there excepted, which exception was allowed by the Court.

[983]

### FINDING VIII.

The Court further finds that the defendant corporations herein completed the construction of the water-power plant provided for in the said agreement of October 14, 1909, prior to the 31st day of October, 1910, and that on the 31st day of October, 1910, the said Oxford Mining Company elected to take the 300 horse-power provided for in the said agreement for its full benefit and practical and uninterrupted use, and elected to convey the property heretofore described in the said contract of October 14, 1909, to the defendant corporations, and that the defendant corporations accepted said election and waiver the two years' time prescribed in said contract for the making of the said election, and that the said Oxford Mining Company duly conveyed to the defendant corporations all of the property described in the agreement of October 14, 1909, on or about the 22d day of April, 1911. The Court further finds that from the 22d of April, 1911, to the 8th of November, 1912, the Oxford Mining Company, or its successors, did not receive any of the power contracted for from the defendant corporations.

To the making of Finding VIII defendants objected, on the ground that it is contrary to the evidence, not supported by sufficient evidence and the finding was not within the issues, more especially



for the reason that the contract between the parties is in writing and the terms of the contract speak for themselves as to the rights of the respective parties, that the same cannot be varied, modified or explained by extrinsic evidence, or by any extrinsic facts or circumstances. Objection is further made to that portion of the finding which relates to the failure to deliver power before November, 1912, for the reason that the evidence conclusively shows that no [984] demand for power or current was made during that period and no complaint was made because power or current was not, during that period, delivered. Each and all of which said objections were overruled by the Court, to which ruling and order of the Court counsel for the defendant then and there excepted, which exception was allowed by the Court. [985]

#### FINDING IX.

On or about the 1st of June, 1912, the Oxford Mining Company sold its property and property rights in Southeastern Alaska to the plaintiff company, including the rights growing out of the said contract of October 14, 1909, and the Court further finds that the plaintiff company is engaged in developing its mines in Sheep Creek and Silver Bow Basin, both from the Sheep Creek and Silver Bow Basin side, and is engaged in pushing its development work as rapidly as possible, and that the said prosecution of the said development work involves the speedy application of the power available to the plaintiff company, and that if the plaintiff company is deprived of said power, its progress will be greatly

delayed and interest burdens upon its bonds and other expenses will be greatly increased, and that there is no other source of power for the carrying on of the plaintiff's development work, and that the plaintiff will be greatly and irreparably damaged if it is deprived of the power provided for in the said contract of October 14, 1909, and that said damage cannot be compensated at law or ascertained.

To the making of said finding No. IX, defendants object on the ground that is contrary to the evidence, not supported by sufficient evidence, and the finding is immaterial and not within the issue, which objections were each and all, then and there, overruled by the Court, to which ruling and order of the Court the defendants then and there excepted, which exceptions were then and there allowed by the Court. [986]

#### FINDING No. X.

That the arrangements for the development of the plaintiff's mining property were made in reliance upon the contract of the defendant corporations herein that they would furnish an uninterrupted current of 300 electric horse-power for the actual and practical use of the plaintiff corporation, and that relying upon said contract and representations of the defendants, the plaintiff engaged a force of over 175 men to perform its underground development work in its Perseverance mine at Silver Bow Basin, and that the daily expense of maintaining said working force is \$750.00, and that the plaintiff has outstanding bonds in the principal sum of \$3,500,000.00, upon which interest is accumulating and upon which

no interest can be paid until the development work of the plaintiff company is completed. That the deprivation of the plaintiff of the power so contracted for will greatly delay the date when the mines of the plaintiff company will become productive and will cause the plaintiff herein to discharge a number of its laborers, and it will be difficult to secure further laborers upon the resumption of the plaintiff's work unless the same are kept continuously at work.

That the defendants objected to the making of said finding on the ground that the same was contrary to the evidence, not supported by sufficient evidence and was not material, and not within the issues which said objections were then and there overruled by the Court, to which ruling and order of the Court the defendants, by counsel, then and there excepted, which exception was allowed by the Court. [987]

#### FINDING XI.

That prior to the 8th of November, 1912, the defendant companies were notified of the assignment of the rights of the Oxford Mining Company to the plaintiff, and were requested to deliver the uninterrupted current of 300 horse-power for the use of the plaintiff; and that prior to the 8th of November, 1911, there had been installed upon the property of the plaintiff in Silver Bow Basin at its Perseverance Mine a 200 horse-power motor of the usual type in mining operations of like character throughout the United States and in the Juneau Mining District, which said motor was connected with an Ingersoll-

Rand compressor using 165 horse-power at 80 pounds pressure, and that there had been installed at the Sheep Creek plant of the company a 150 horse-power motor and a 20 horse-power motor; and that in connection with the 150 horse-power motor there was used a compressor of 165 horse-power for the purpose of driving an adit tunnel from the Sheep Creek mines to a point underneath the Ground Hog and Perseverance mines; and that on the 8th of November, 1911, the defendant corporations had connected their power plant with the transmission line of the plaintiff company and set in their power-house a so-called automatic circuit-breaker, which said circuit-breaker was set so as to break a circuit when a maximum of between 80 and 100 amperes was being drawn over the transmission line of the plaintiff company. That from the 8th day of November, 1912, to the 2d day of December, 1912, the machinery above described at Sheep Creek was operated without difficulty from said current so supplied by the defendant corporations, and the setting of the said circuit-breaker proved sufficient to produce a sufficient practical working efficiency at the power-house of the defendant company of three hundred horse-power. That on the 2d day of December the machinery of the plaintiff company in the Silver Bow Basin or Perseverance mine was also placed upon the said circuit and successfully operated until the 4th of December, when the operations of the Perseverance mine were temporarily suspended by reason of a fire which [988] destroyed a 100-stamp mill of the plaintiff company at that point. That between the



4th and 6th of December, 1912, one Proebstil, an electrician of the defendant companies, visited the Sheep Creek power-house and reduced the setting of the circuit-breaker to a point which would throw the same out and break the current when more than 60 amperes were drawn through said circuit. The voltage being maintained at about 2,300. That the said circuit-breaker so installed is not of the usual ordinary type used upon feeders leaving power-houses, but is what is known as an instantaneous circuit-breaker; that the ordinary and usual type of circuit-breaker placed upon feeders leaving direct from power-houses is what is known as a thirty-second time relay circuit-breaker which guards against the circuit-breaker being thrown out by momentary and unavoidable surges of current. That the starting of machinery which will consume a given amount of power often causes what is known as a starting surge which lasts from ten to thirty seconds but from a practical standpoint is not taken into account or charged for in electrical connections, and is disregarded and provided against by the use of the ordinary type of time relay circuit-breaker. That in the Juneau Mining District it is not customary for the defendant companies to charge any other customer for the necessary starting surges for machinery connected with the said power-plant of the defendant companies, but that the power is measured upon the amount taken under normal conditions, that is to say, by the amount of power taken after the machinery is started and in operation. [989]

In making of which said finding No. XI defend-



ants objected on the ground that the same was contrary to the evidence, not supported by sufficient evidence, was not within the issues and immaterial, which objections go more especially to the following particular features of the finding.

That the Court finds that an instantaneous circuit-breaker is not the usual ordinary type in use upon feeders leaving power-houses, but that the ordinary type in use is a thirty-second relay circuit-breaker. This part of the finding is contrary to the evidence and is immaterial, the question in the case being not what machinery is ordinarily used but whether the quantity of current furnished complies with the conditions of the contract.

The Court further finds that it is not customary for the defendant companies to charge other customers for necessary starting surges. This part of the finding is immaterial and is directly contrary to all the evidence in the case, the undisputed evidence showing that the defendant companies have no other customer or customers whatsoever; that they are not furnishing electric current to anyone except the plaintiff, with this exception, that they are accommodating the Alaska Juneau Mining Company, a corporation under the same management by temporarily supplying them with current at a high rate, and there is no evidence to show that the Alaska Juneau Mining Company, at any time, used starting surges or current that were not paid for.

Each and all of said objections were then and there overruled by the Court, to which ruling and order of the Court defendants, by counsel, then and there

objected, which objection was then and there allowed by the Court. [990]

### FINDING No. XII.

That in establishing the circuit between the plaintiff and the defendant companies the defendant corporations have set their instantaneous circuit-breaker upon a theoretical basis of what is known as unity power factor, that is to say, the defendants have not installed a wattmeter upon said circuit nor set the circuit-breaker upon observations taken from an ammeter and their other meters, such as volt and ampere meters, at the time the wattmeter indicates a consumption of 300 horse-power, but that they have assumed that the power factor of the said circuit is 100 per cent, and multiplied the same by the voltage of 2,300 volts and by the constant attributed to a three-phase electric current. The Court further finds that there is no circuit upon the power lines of the defendant companies, either in connection with the plaintiff or any of their other lines, which has a power factor of unity or 100 per cent. And the Court further finds that at the present time there are no motors other than induction motors used in connection with the power plant of defendant companies. The Court further finds that wherever an induction motor is used the power factor is less than unity and the actual and effective horse-power passing over any circuit under such conditions can only be measured by a wattmeter and the circuit-breakers in connection with such circuits set in accordance with observations taken from a wattmeter. The Court further finds that in the summer of 1912 the

defendants ordered a curve drawing wattmeter to be placed upon the switch board of the circuit between the plaintiff and the defendant companies and that the same is in possession of the defendants but the defendants have not installed said wattmeter. And the Court further finds that the defendants have refused to allow the plaintiff to install a wattmeter upon the panel at the power-house of the defendant companies at which panel connection is made between the transmission line of the plaintiff and the power-house of the defendant companies. The Court [991] further finds that in estimating and measuring the power used by the defendants themselves upon their own circuits the defendants use a wattmeter. The Court further finds that the wattmeter is the common, ordinary and universal device used in measuring horse-power.

That the defendants objected to making Finding No. XII, on the ground that it is contrary to the evidence, not supported by sufficient evidence, on the ground that the finding is not material and not within the issues, each and all of which said objections were overruled by the Court, to which ruling and order of the Court defendants, by counsel, then and there excepted, which exceptions were then and there allowed by the Court. [992]

#### FINDING No. XIII.

The Court further finds that it is the common practice where a certain amount of horse-power is normally used, for the producing company to allow a reasonable starting surge to the consumer sufficient to start and put in operation machinery which will

normally consume the current provided for.

Defendants objected to the making of Finding No. XIII, on the ground that it is contrary to the evidence, not supported by sufficient evidence, and that it is immaterial and not within the issues of the case; that whatever might be the custom relating to starting surges, this custom would not affect the right of parties in this case, in view of the facts that the rights of the parties are limited and defined by a written contract, explicit in its terms. Each and all of which said objections were then and there overruled by the Court, to which ruling and order of the Court defendants, by counsel, then and there excepted, which exceptions were allowed by the Court. [993]

#### FINDING XIV.

The Court further finds that on or about the 13th day of December, 1912, an electric current was again turned on to the operation of the machinery at the Perseverance mine and the machinery continued to operate until the night of the 24th of December, when the mine shut down for Christmas Day, and that since said time the plaintiff has been unable to start the machinery at the Perseverance mine with the current provided by the defendant except under orders of the Court requiring the defendants to hold in their circuit-breaker during the momentary starting surge.

Said Finding No. XIV, was objected to by counsel for the defendants on the ground that the same was contrary to the evidence, not supported by sufficient evidence and the finding was immaterial and not within the issues. The matters related to in the finding are especially immaterial, for the reason that



the contract provides that a certain quantity of current shall be furnished and the question of whether such current is made effective or what is done with it in on wise affects the rights of the parties, which said objection was then and there overruled by the Court, to which order and ruling of the Court defendants, by counsel, then and there excepted, which exceptions were allowed by the Court.

No. XV as originally drafted was omitted by the Court when the findings were made, which accounts for the fact that there is no No. XV. [994]

#### FINDING No. XVI.

The Court further finds that the defendants herein have adopted the practice whenever the said instantaneous circuit-breaker is thrown out, of requiring the plaintiff to notify the defendant corporations at their head office at Treadwell, Alaska, a point about two miles distant from the Sheep Creek power plant and across Gastineau Channel, an arm of the North Pacific Ocean, and that the defendants refuse to allow their electricians at the Sheep Creek power plant to restore the circuit-breaker whenever the same goes out, but require that they be notified at their head office at Treadwell and then send a man across Gastineau Channel to replace the circuit-breaker, and that this practice deprives the plaintiff of an uninterrupted current for periods covering from one to eight hours whenever the said circuit-breaker goes out. The Court finds that at no time since the 6th day of December, 1912, except during the momentary starting surges hereinbefore described, have the defendants furnished the plaintiff with as much as the



300 horse-power provided for in the said contract, and further finds that the defendants have failed to provide the plaintiff with an uninterrupted current of 300 horse-power.

Said finding was objected to by counsel for the defendants on the ground that the same was contrary to the evidence, not supported by sufficient evidence and laws immaterial and not within the issues in the case. That portion of the Court's finding where it finds that the defendant have not since the 6th day of December, 1912, except in the momentary starting surges in the findings referred to, furnished the plaintiff with 300 horse-power provided for in the contract, or have failed to furnish the plaintiff with an uninterrupted current of 300 horse-power is wholly unsupported by the evidence, contrary to the evidence and conflicting with other findings made by the Court. All of which said objections were overruled by the Court, to which order and [995] ruling of the Court defendants, by counsel, excepted, which exceptions were then and there allowed by the Court. [996]

#### FINDING No. XVII.

The Court further finds that at the time the said contract of October 14, 1909, was executed neither the Oxford Mining Company nor its predecessors in interest had any other power-plant with which to connect the said current of 300 horse-power and that no other plant was in contemplation at that time, and that it was the intention of the defendants to provide for the actual and beneficial use of a current of 300 real horse-power at the power plant of the defendant

corporation, and that from the surrounding circumstances a starting surge was naturally to be implied or presumed, and that without a starting surge (in connection with induction motors, which the Court finds is the ordinary type of motor in mining use, for loads of 300 horse-power or less) the practical and beneficial use of more than 100 horse-power could not have been obtained. The Court further finds that under the conditions existing aforesaid at the time the contract was executed the parties could not have contemplated the uninterrupted delivery of 300 horse-power provided for in the contract unless a starting surge was implied in the said contract."

The defendants objected to said Finding No. XVII, on the grounds that the same is contrary to the evidence, was not supported by sufficient evidence, and that said finding was immaterial and not within the issues. The objection to this finding being more especially that the fact that the first part of the finding relating to the fact that the Court finds that [997] the current to be furnished in the contract was one of real or developed horse-power as distinguished from a current from which 300 horse-power can be developed, such construction is erroneous, and if regarded as a finding based upon extrinsic evidence, is immaterial in view of the fact that the rights of the parties are determined by the terms of the written contract sued upon, which is in evidence, and that part of finding No. XVII which the Court finds from surrounding circumstances that the starting surge was naturally to be implied or presumed, and that without a starting surge in connection with induction

motors, which the Court finds to be the ordinary kind of motor in mining use for loads of 300 horse-power or less the practical and beneficial use of more than 100 horse-power could not have been obtained, was wholly contrary to the evidence, and further is immaterial and not within the issues, since the rights of the parties must be determined from the contract itself, and by that contract the current to be furnished is limited to a current of not to exceed 300 horse-power; and that further portion of the Court's finding in which the Court finds that the parties could not have contemplated the uninterrupted delivery of 300 horse-power provided for in the contract unless a starting surge was implied, is open to the same special objections last mentioned, all of which said objections were then and there overruled by the Court, to which ruling and order of the Court, defendants by counsel then and there excepted, which exception was allowed by the Court. [998]

#### FINDING No. XVIII.

The Court further finds that an inverse time relay circuit-breaker which will resist ordinary overloads for the period of thirty seconds is the usual, common and proper device for maintaining connections upon lines leaving power-houses, and that such circuit-breaker should be installed upon the switch-board of the defendant companies so as to protect the defendant companies from short circuits, yet provide enough resistance to prevent the circuit between the plaintiff and defendant companies from being broken under ordinary starting surges.

Which said Finding No. XVIII was objected to by defendants on the ground that it is contrary to the evidence, not supported by sufficient evidence and is immaterial and not within the issues.

That said finding is objectionable more especially in that it is immaterial whether or not a time relay circuit-breaker is the proper device under the circumstances related to in the finding, since the contract sued upon does not provide for excessive currents of any duration, but explicitly limits the current to one of not to exceed 300 horse-power; and further, that it is not within the province of the Court to determine what device or machine is proper or not proper, the only question being whether the current furnished complies with the conditions of the contract; each and all of said objections [999] were then and there overruled by the Court, to which ruling and order of the Court defendants by counsel then and there excepted, which exception was then and there allowed by the Court. [1000]

### **[Conclusions of Law Requested by Defendants.]**

Thereupon the defendants asked the Court to adopt as its Conclusion of Law the following conclusion of law No. 1, which is in words and figures as follows, to wit:

#### **CONCLUSION OF LAW No. 1.**

From the facts found the Court concludes that the defendant companies in making available for the plaintiff's use, an electric current in excess of 56.2 amperes with a voltage of 2300 impressed have complied with each and all of the terms of the contracts



entered into between the parties on their part.

Which said conclusion of law the Court failed to and refused to make or adopt, and the request of the defendants in that behalf was denied, to which ruling and order of the Court defendants by counsel then and there excepted, which exception was then and there allowed by the Court. [1001]

Thereupon the defendants requested the Court to make and adopt its said conclusion of law, defendant's conclusion of law No. II as requested, which is in words and figures as follows:

#### CONCLUSION OF LAW No. II.

The Court further concludes from the facts found that the plaintiff's bill of complaint be dismissed and that the defendants recover their costs and disbursements in this behalf incurred.

Whereupon the Court denied the defendant's request in that behalf and refused to adopt or make defendants' conclusion of law No. II as requested, to which ruling and order of the Court the defendants by counsel then and there excepted, which exception was then and there allowed by the Court.

Thereupon the Court made and entered and adopted its conclusions of law, which are as follows: [1002]

#### [Conclusions.]

#### CONCLUSION OF LAW No. I.

That the plaintiff herein is entitled to have the contract, hereinbefore set forth, specifically performed by the defendants and each of them.

Defendants object to conclusion No. I herein on the



grounds that it is contrary to the findings; that it is contrary to the evidence in the case and that it is contrary to law; which objections are overruled by the Court and to such ruling of the Court an exception is hereby allowed the defendants. [1003]

#### CONCLUSION OF LAW No. II.

That the plaintiff herein is entitled to the actual and beneficial use of an uninterrupted current of 300 real horse-power.

Defendants object to conclusion No. II herein on the grounds that it is contrary to the findings; that it is contrary to the evidence in the case, and that it is contrary to law; which objections are overruled by the Court, and to such ruling of the Court an exception is hereby allowed the defendants. [1004]

#### CONCLUSION OF LAW No. III.

That the plaintiff is entitled to all reasonable surges of power necessary in starting ordinary apparatus used in connection with mining, so that an uninterrupted and normal current of 200 actual horse-power may be continuously used after the starting of such machinery.

Defendants object to conclusion No. III herein on the grounds that it is contrary to the findings; that it is contrary to the evidence in the case and that it is contrary to law; which objections are overruled by the Court, and to such ruling of the Court an exception is hereby allowed the defendants. [1005]

#### CONCLUSION OF LAW No. IV.

That the contract in question contemplated and referred to the use of real power, and that the connec-

tions of the defendant companies with the transmission line of the plaintiff company be so established as to prevent the breaking of said circuit upon the use of said momentary starting surges, and that the circuit-breakers of the defendant companies be so installed so as to permit reasonable and momentary starting surges.

Defendants object to conclusion No. IV herein on the grounds that it is contrary to the findings; that it is contrary to law; which objections are overruled by the Court, and to such ruling of the Court an exception is hereby allowed the defendants. [1006]

#### CONCLUSION OF LAW No. V.

That the defendant companies so arrange their connection with the power line of the plaintiff company that in addition to said starting surges the plaintiff company be enabled to draw 300 actual horse-power uninterruptedly in their operations, and that the apparatus and devices installed by the defendants for the purpose of maintaining a circuit with the plaintiff company be set and regulated according to approved wattmeter readings so that the current will not be interrupted except when more than 300 actual horse-power, according to wattmeter readings, is being taken by the plaintiff of the defendant companies.

Defendants object to conclusion No. V herein on the grounds that it is contrary to the findings; that it is contrary to the evidence in the case and that it is contrary to law; which objections are overruled by the Court, and to such ruling of the Court an exception is hereby allowed the defendants. [1007]

CONCLUSION OF LAW No. VI.

That the plaintiff is entitled to have established upon the connection of the plaintiff with the defendant companies at the switch-board at the power plant of the defendant companies situated at Sheep Creek a thirty-second inverse time relay circuit-breaker so as to provide for ordinary overloads necessary to starting surges.

Defendants object to conclusion No. VI herein on the grounds that it is contrary to the findings; that it is contrary to the evidence in the case and that it is contrary to law; which objections are overruled by the Court, and to such ruling of the Court an exception is hereby allowed the defendants. [1008]

BE IT FURTHER REMEMBERED that there-upon the Court made and entered its judgment and decree, which is in words and figures as follows, to wit: [1009]

*In the District Court for the District of Alaska, Division No. 1, at Juneau.*

No. 968-A.

ALASKA GASTINEAU MINING COMPANY, a  
Corporation,

Plaintiff,

vs.

ALASKA TREADWELL GOLD MINING COMPANY, a Corporation, ALASKA UNITED GOLD MINING COMPANY, a Corporation, ALASKA MEXICAN GOLD MINING COMPANY, a Corporation, and ROBERT A. KINZIE,

Defendants.

**Decree.**

This matter having come on heretofore for hearing and the testimony of the plaintiff and the defendants having been submitted herein taken under advisement, and the Court having made and entered its findings of fact and conclusions of law herein, the parties having at all times appeared by their respective attorneys, Messrs. Shackelford & Bayless and Z. R. Cheney for the plaintiff, and Messrs. Hellenthal & Hellenthal for the defendants, and the Court being fully advised in the premises:

**IT IS ORDERED, ADJUDGED AND DECREED:**

1. That the plaintiff is entitled to have and receive of and from the defendants under and by virtue of the contract set forth in the plaintiff's complaint the uninterrupted and beneficial use of 300 real or actual horse-power to be supplied by electric current;

2. That the plaintiff is entitled to have and receive of the defendants all reasonable starting surges used in connection with the ordinary machinery used in mining for the application of 300 horse-power or less and necessary to the starting of such machinery and to the beneficial use of an uninterrupted current of 300 horse-power;

3. That the plaintiff is entitled to the use of real and not apparent power, the same to be measured by wattmeter, and that the plaintiff is entitled to use upon the circuit connecting it with the power-house of the defendants any ordinary motors used in mining operations (whether of the induction type or

otherwise) commonly and ordinarily used in mining operations consuming 300 horse-power or less.

IT IS ORDERED, ADJUDGED AND DECREED that the defendants herein so set and maintain their connections, circuit-breakers and other appliances with the plaintiff company that the actual, uninterrupted and beneficial use of the before mentioned rights of the plaintiff shall not in any way be interfered with, and the defendants are enjoined from using any appliances which will deprive the plaintiff of the enjoyment of the rights above decreed to the plaintiff; and defendants are perpetually enjoined from maintaining any circuit-breaker or other appliance which will deprive the plaintiff of 300 actual horse-power, or any part thereof, to be measured by wattmeters or which will deprive [1010] plaintiff of any reasonable starting surges to the enjoyment of the uninterrupted use of the said 300 actual horse-power.

The Court further decrees that the plaintiff be allowed to install upon the switch-board connecting the plaintiff's power line with the defendants' powerhouse a wattmeter, voltmeter and ammeter, and that the same be installed in such a way that the plaintiff may have the same under lock and key for its information and inspection to check the wattmeter, voltmeter and ammeter readings of the defendant companies at said point.

IT IS FURTHER ORDERED, ADJUDGED AND DECREED in accordance with the foregoing that the contract of October 14, 1909, be specifically performed by the defendants.



IT IS FURTHER ORDERED, ADJUDGED AND DECREED that the defendants and each of them are hereby enjoined from doing any act or thing which will interfere with the enjoyment of the rights herein decreed to the plaintiff and against the defendants.

IT IS FURTHER ORDERED, ADJUDGED AND DECREED that the defendants maintain and install upon the connection of the plaintiff's power line with the power-house of the defendants at the switch-board at the power-house at Sheep Creek an inverse thirty-second time relay circuit-breaker in such a manner as to provide reasonable starting surges in connection with the operation of the machinery of the plaintiff company upon said power line, which said circuit-breaker shall be set at all times so as to give an uninterrupted current of 300 real horse-power as distinguished from apparent power, to be set and maintained in addition to the thirty-second resistance in the said circuit-breaker which is decreed for the purpose of providing to the plaintiff reasonable and adequate means of obtaining starting surges without interruption in their operations, and that the plaintiff have and recover of and from the defendants its costs and disbursements herein laid out and expended.

Done in open court this 12th day of June, 1913.

PETER D. OVERFIELD,

Judge. [1011]

BE IT FURTHER REMEMBERED that the defendants thereupon and within the time prescribed

by law filed their motion for new trial, which is in words and figures as follows: [1012]

*In the District Court for the Territory of Alaska, Division No. 1, at Juneau.*

Case No. 968-A.

ALASKA GASTINEAU MINING COMPANY, a  
Corporation,

Plaintiff,

vs.

ALASKA TREADWELL GOLD MINING COMPANY, a Corporation, ALASKA UNITED GOLD MINING COMPANY, a Corporation, ALASKA MEXICAN GOLD MINING COMPANY, a Corporation, and ROBERT A. KINZIE,

Defendants.

**Motion for New Trial.**

Come now the defendants in the above-entitled cause and respectfully move the Court to grant a new trial, for the reason that the evidence is insufficient to justify the decision, and that it is against the law, for the reason that the Court erred in refusing to receive evidence offered on behalf of the defendants to the fact that the plaintiff had not complied with the contract, to which exception was duly and regularly taken at the time of the trial, and for the further reason that the Court erred in refusing to permit the defendants to amend their answer relative to non-compliance of the contract by the plaintiff, to

which exception was duly and regularly taken by the defendants on the trial.

Dated this 12th day of June, A. D. 1913.

HELLENTHAL & HELLENTHAL,

Attorneys for Defendants. [1013]

Which said motion for new trial was then and there overruled by the Court and a new trial herein denied, to which ruling and order of the Court defendants then and there excepted and an exception was then and there allowed the defendants by the Court. [1014]

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*In the District Court for the Territory of Alaska, Division No. 1, at Juneau.*

Case No. 968-A.

ALASKA GASTINEAU MINING COMPANY, a  
Corporation,

Plaintiff,

vs.

ALASKA TREADWELL GOLD MINING COMPANY, a Corporation, ALASKA UNITED GOLD MINING COMPANY, a Corporation, ALASKA MEXICAN GOLD MINING COMPANY, a Corporation, and ROBERT A. KINZIE,

Defendants.

**Order [Denying Motion for a New Trial].**

This matter coming on defendant's motion praying for a new trial in the above-entitled cause, and

1098 *Alaska Treadwell Gold Mining Co. et al.*

the Court, being fully advised in the premises, denies the same.

Ordered this 12th day of June, A. D. 1913.

PETER D. OVERFIELD,

Judge. [1015]

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**[Order Allowing Exceptions to Order Denying a  
New Trial.]**

*In the District Court for the Territory of Alaska, Di-  
vision No. 1, at Juneau.*

No. 968-A.

ALASKA GASTINEAU MINING COMPANY, a  
Corporation,

Plaintiff,

vs.

ALASKA TREADWELL GOLD MINING COM-  
PANY, a Corporation, ALASKA UNITED  
GOLD MINING COMPANY, a Corporation,  
ALASKA MEXICAN GOLD MINING  
COMPANY, a Corporation, and ROBERT A.  
KINZIE,

Defendants.

The motion for a new trial having been filed herein within the time prescribed by law and said motion having been denied by the Court, the defense and each of them accept such ruling and order of the Court in that behalf, the Court does hereby allow the defense and each of them an exception to the order and ruling of the Court denying a new trial herein.

Done this 12th day of June, A. D. 1913.

PETER D. OVERFIELD,

Judge. [1016]

Motion for new trial was denied and the defendants were granted 90 days from and after the date of the judgment and decree to present their bill of exceptions herein. [1017]

And now come the defendants within the time granted them by the Court within which to present and file their bill of exceptions, and present this their bill of exceptions, and ask that the Court make an order allowing and settling the same and directing the same to be made a part of the record hereof. [1018]

*In the District Court for the Territory of Alaska,  
Division No. 1, at Juneau.*

ALASKA GASTINEAU MINING COMPANY, a  
Corporation,

Plaintiff,

vs.

ALASKA TREADWELL GOLD MINING COMPANY, a Corporation, ALASKA UNITED GOLD MINING COMPANY, a Corporation, ALASKA MEXICAN GOLD MINING COMPANY, a Corporation, and ROBERT A. KINZIE,

Defendants.

**Order Settling and Allowing Bill of Exceptions.**

This matter coming on to be heard before me, Fred M. Brown, Judge of the above-entitled court,



on the motion of the defendants, the Alaska Treadwell Gold Mining Company, a corporation; Alaska United Gold Mining Company, a corporation; Alaska Mexican Gold Mining Company, a corporation; and Robert A. Kinzie, asking that the above and foregoing bill of exceptions be settled and allowed by the Court, and the Court being fully advised in the premises;

DOES HEREBY SETTLE AND ALLOW the above and foregoing bill of exceptions as a true, accurate, full and complete bill of exceptions herein, and the Court does hereby certify that all the evidence adduced at the trial by each and all of the parties hereto is fully and accurately set out in the above and foregoing bill of exceptions, and that said bill of exceptions contains all the evidence adduced at the trial, as well as the orders, rulings and proceedings had therein, all of which was fully and accurately set out in said bill of exceptions. [1019]

And IT IS FURTHER ORDERED that said bill of exceptions so containing all the evidence, orders and proceedings had and the whole and each and every part thereof be settled and allowed and made a part of the record in this case; and the Court further certifies that the bill of exceptions so settled and allowed was presented to it within the time prescribed by law and the rules of this Court and within the time allowed by this Court by an order made and entered for that purpose.

Done in open court this 9th day of August, A. D. 1913.

FRED M. BROWN,  
Judge.

[Endorsed]: No. 968—A. In the District Court for the Territory of Alaska, Division No. 1. Alaska Gastineau Mining Company, Plaintiff, vs. Alaska Treadwell Gold Mining Company et al., Defendant. Bill of Exceptions. Hellenthal & Hellenthal, Attorneys for Defendants. Office: Juneau, Alaska. Filed in the District Court, District of Alaska, First Division. Aug. 9, 1913. E. W. Pettit, Clerk. [1020]

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*In the District Court for the Territory of Alaska,  
Division No. 1, at Juneau.*

ALASKA TREADWELL GOLD MINING COMPANY, a Corporation, ALASKA UNITED GOLD MINING COMPANY, a Corporation, ALASKA MEXICAN GOLD MINING COMPANY, a Corporation, and ROBERT A. KINZIE,

Appellants,

vs.

ALASKA GASTINEAU MINING COMPANY, a Corporation,

Appellee.

**Petition for an Appeal.**

The above-named Alaska Treadwell Gold Mining Company, a corporation; Alaska United Gold Mining Company, a corporation; Alaska Mexican Gold Mining Company, a corporation; and Robert A. Kinzie, appellants herein, each and all conceiving themselves aggrieved by the decree and judgment

rendered herein on the 12th day of June, 1913, which said decree and judgment were signed and entered by the Honorable Peter D. Overfield, Judge of the above-entitled court, on the date above mentioned, and were rendered in favor of the Alaska Gastineau Mining Company, a corporation, and against the Alaska Treadwell Gold Mining Company, a corporation, Alaska United Gold Mining Company, a corporation, Alaska Mexican Gold Mining Company, a corporation, and Robert A. Kinzie, do each and all hereby appeal from said judgment and decree to the United States Circuit Court of Appeals for the Ninth Circuit, and they and each of them pray that this their appeal may be allowed, [1021] and that a transcript of the record and proceedings and papers upon which said judgment and decree was made duly authenticated may be sent to the United States Circuit Court of Appeals for the Ninth Circuit; and that the above-named appellants and each of them do further pray that they may be allowed an appeal from said judgment and decree and from the whole and every part thereof to the said United States Circuit Court of Appeals for the Ninth Circuit as prayed for; and appellants further pray that they may be given a supersedeas herein in order that the decree complained of may not be enforced against them, or either or any of them, until the errors herein complained of can be reviewed by the

said United States Circuit Court of Appeals for the Ninth Circuit.

J. A. HELLENTHAL,  
S. HELLENTHAL,

HELLENTHAL & HELLENTHAL,  
Attorneys for the Appellants, Alaska Treadwell Gold Mining Company, a Corporation, Alaska United Gold Mining Company, a Corporation, Alaska Mexican Gold Mining Company, a Corporation, and Robert A. Kinzie.

And now, to wit, on the 8th day of August, 1913, it is ordered that the appeal herein be allowed as above prayed for.

FRED M. BROWN,  
Judge.

Entered Court Journal No. 1, page 118.

Due service by copy of the within admitted this 7th day of August, 1913.

SHACKLEFORD & BAYLESS,  
Z. R. CHENEY,

Attorneys for Defendant.

Original. No. ——. In the District Court for the Territory of Alaska, Division No. 1. Alaska Treadwell Gold Mining Company, a Corporation, et al., Appellants, vs. Alaska Gastineau Mining Company, a Corporation, Appellee. Petition for an Appeal. Hellenthal & Hellenthal, Attorneys for Appellants. Office: Juneau, Alaska. Filed in the District Court, District of Alaska, First Division. Aug. 8, 1913. E. W. Pettit, Clerk. By H. Malone, Deputy. [1022]

*In the District Court for the Territory of Alaska,  
Division No. 1, at Juneau.*

ALASKA TREADWELL GOLD MINING COM-  
PANY, a Corporation, ALASKA UNITED  
GOLD MINING COMPANY, a Corporation,  
ALASKA MEXICAN GOLD MINING  
COMPANY, a Corporation, and ROBERT  
A. KINZIE,

Appellants,

vs.

ALASKA GASTINEAU MINING COMPANY, a  
Corporation,

Appellee.

**Assignment of Errors.**

Come now the Alaska Treadwell Gold Mining Company, a corporation, Alaska United Gold Mining Company, a corporation, Alaska Mexican Gold Mining Company, a corporation, and Robert A. Kinzie, the appellants herein, and assign the following errors made by the trial court, as the errors upon which the said appellants will rely for a reversal of the decree rendered herein.

**I.**

The District Court for the District of Alaska, Division Number One, erred in overruling the defendant's demurrer to the plaintiff's complaint, which said demurrer was in words and figures as follows:

[1023]



*“In the District Court for the Territory of Alaska,  
Division No. 1, at Juneau.*

Case No. 968—A.

ALASKA GASTINEAU MINING COMPANY, a  
Corporation,

Plaintiff,

vs.

ALASKA TREADWELL GOLD MINING COM-  
PANY, a Corporation, ALASKA UNITED  
GOLD MINING COMPANY, a Corporation,  
ALASKA MEXICAN GOLD MINING  
COMPANY, a Corporation, and ROBERT  
A. KINZIE,

Defendants.

**Demurrer.**

Come now the defendants and each of them and demur to the complaint of the plaintiff herein for the reasons:

First—That the complaint does not state facts sufficient to constitute a cause of action against said defendants or against either or any of them;

Second—That the Court has no jurisdiction to grant the relief demanded;

Third—That no facts are set up in the complaint under which a court of equity would have jurisdiction to grant the relief asked for or any relief whatsoever against any one or more of the defendants; and

Further that it appears upon the face of the complaint itself that the plaintiff has a plain, speedy

and adequate remedy at law.

HELLENTHAL & HELLENTHAL,

Attorneys for all the Defendants."

## II.

The District Court for the District of Alaska, Division Number One, erred in permitting the witness Shackleford to testify to the negotiations had between him, as the representative of the predecessors in interest of the appellee, and Mr. Bradley, as the representative of the appellant companies, as well as to the agreements had between the parties, for the reason that the contract [1024] sued upon was in writing, and all the negotiations had and agreements had prior to the execution of this contract had merged into the written contract, and testimony relative to such negotiations and agreements was irrelevant, incompetent and immaterial. The question asked the witness Shackleford reads as follows: "Well, what negotiations did you have with Mr. Bradley about that time?" To this question appellants objected on the ground that whatever negotiations were had was incompetent, irrelevant and immaterial, because such negotiations had all been merged into the written contract, and the written contract was the contract before the court, which objection was then and there overruled by the Court, and the appellants were then and there give an exception to such ruling and order of the Court.

It was then and there understood between the Court and counsel and the parties that any and all testimony bearing upon agreements or negotiations

had between the parties outside of the written contract sued upon would go in under the objection of appellants as being irrelevant, incompetent and immaterial, and that the matters referred to had all merged into the written contract, and that the Court having overruled said objection would grant appellants an exception to such order and ruling; whereupon the witness Shackleford testified as follows:

“A. (By the WITNESS.) In the early part of August, 1909, Mr. Bradley came to my office and stated that they would like to acquire what is known as the lower water right and power plant and millsites on Sheep Creek. That plant was in a state where it could be used, but it hadn't been in use for two or three years. The title to the Sheep Creek mines having been in dispute, and after some discussion I informed him that I didn't think he was prepared, from his offers, to pay a price that would be attractive to the owners of the property, [1025] and he finally outlined an agreement which he called—I have forgotten the exact term. It is a—

Q. (By Mr. BAYLESS.) Flood water contract?

A. —flood water agreement, and it was practically in the form that it is now.

Q. (By the COURT.) At what time was that?

A. That was in the month of August, 1909. So, within two or three days, some time prior to the 10th of August, his representations at

that time was that he was willing to insure to the International Trust Company and the parties interested in that property or in the Sheep Creek mines sufficient power to operate the Sheep Creek mines, and I told him that I thought a contract along that line giving adequate power for the operation of the mine might meet with the approval of the Boston bondholders and of the trust company. He estimated that we would need at least 150 horsepower to operate the mines with; that was not to start the machinery, but to operate the mines with, and he said that he thought 200 horsepower would be a liberal estimate for the power continuously required in the operation of the mine. The contract was a draft of our ideas about the matter.

A. (By the WITNESS.) A draft of our ideas about the matter so far as we had gotten, involving a lease during the period of the construction and an option to take the horse-power and an option in the case we didn't at the end of ten years take the horse-power, was drawn up and various alterations in it were made.

Q. (By the COURT.) Who drew up the option?

A. I drew a skeleton of the option, and after that time the option was either drawn or dictated by Mr. Bradley or Mr. Taylor. The option probably will be—the original draft is probably in my handwriting very largely, as both the gentlemen suggested alterations and changes

I would note them. The option or the contract, I should say, wasn't signed by either of the parties at that time. It was simply a draft for submission in Boston.

Q. Drawn up where originally?

A. Drawn up here in Juneau and at Treadwell—after it was completed, I will say that the last clause in the option defining an uninterrupted current was drawn by me. I originally used the word 'continuous' instead of 'uninterrupted,' and it stood in the contract, I think, until we got on a boat. We went down below together. At that time it was changed to the word 'uninterrupted' at Mr. Taylor's suggestion because he said continuous had a meaning in electricity which might [1026] require them to deliver a direct—at any rate that word was changed. However, when the contract was completed, Mr. Bradley wrote a letter to Mr. Henry Endicott, who was the most influential bondholder in the—under the mortgage deed of trust, held by the International Trust Company and who represented most of the other bondholders, and I took that letter with me and a draft of the contract. The original of that letter is in Boston. I have a copy, however, which I have examined and which I know to be a correct copy, and I will present the letter in connection with my testimony.

A. (By the WITNESS.)—Upon my arrival in Boston I presented to them the draft of the contract and the matter was discussed between



the three principal bondholders and myself, Mr. Henry Endicott, Mr. William Endicott and Mr. Wallace Hackett,—and they asked me if I considered 200 horse-power adequate, and I told them that was a subject upon which I declined to advise them, because I had no technical knowledge of the requirements of the plant. I could tell them there was a thirty stamp-mill there and about the machinery that was there. At that time Mr. Thane was in Boston, and they took the matter up with him and asked him.

Q. (By Mr. BAYLESS.) I will ask you, Mr. Shackelford, if the conversation in Boston and negotiations there—you had with the Endicotts and Wallace Hackett was afterwards made known to the Treadwell Company?

A. I don't think the details of them were. The result of Mr. Thane's advice was made known to Bradley.

Q. (By the COURT.) Made known to Treadwell? A. To Mr. Bradley.

A. (By the WITNESS.) All, I may say on the subject is simply this, that after consulting with Mr. Thane he advised them that they would require 300 horse-power in continuous use to operate that mine. Thereupon Mr. Henry Endicott sent a wire to Mr. Bradley, at Wardner, Idaho, a copy of which I present for identification and ask to be offered.

Q. (By the COURT.) You were present at the time that Thane discussed this matter with Endicott and Hackett? A. Yes, sir.

A. (By the WITNESS.) Two or three days afterwards—the exact date I haven't, and the exact date of Mr. Bradley's telegram I haven't, but I have a copy of — of both of the telegrams —Mr. Endicott received the following telegram from Mr. Bradley. [1027]

A. (By the WITNESS.) Thereupon there was no—there was nothing done for several days until Mr. Bradley's wire was received. Shortly after that Mr. Hackett and I proceeded with the organization of the Oxford Mining Company and the property theretofore held in trust by the International Trust Company was deeded to the Oxford Mining Company as soon as the president of the Trust Company returned from Europe as *as* soon as this was done the contract, as drafted or submitted by Mr. Bradley with his letter in August, was signed exactly as drafted and submitted except wherever the words two hundred horse-power had appeared in the contract originally the words three hundred horse-power were substituted.

Q. (By Mr. BAYLESS.) During all these negotiations was anything said by either of the parties with reference to a starting surge?

A. No; nothing was said at all. I had no knowledge whatever of the necessity of a starting surge. I didn't suggest it; didn't discuss it. The estimates that were made of the amount of power that we would require by Mr. Bradley at the time the contract was drawn was based on the actual need of the mine and not upon any

starting surge, as discussed here, and it wasn't until after August, 1910—after we had elected to take the current that any statement was made to me or anybody with my knowledge concerning the fact that the starting surge was necessary or that the contract meant anything else in practical and effectual terms than three hundred horse-power.

Q. Nothing was said about a peak load?

A. Nothing was said about a peak load by any of the parties until after we had elected to take the current.

Q. And Mr. Bradley and Mr. Taylor practically drafted the contract as afterwards signed?

A. It was drafted as their proposition. They didn't sign it—they drafted it and then enclosed it in this letter from Mr. Bradley which has been presented. As soon as the Oxford Company signed the contract it was sent to San Francisco and signed there.

Q. And the only change that the Oxford Company put in to Mr. Bradley's contract was three hundred horse-power where Mr. Bradley had two hundred?     A. That is it.

Q. And it was the representations of Mr. Bradley upon which the Oxford Company, Wallace Hackett and the Endicotts relied? [1028]

A. Yes; this correspondence was presented to them and from the discussions had at the time I know that they assumed that they would have an effectual power at their disposal of the amount named in the contract."

That all and singular the above and foregoing evidence was received by the Court over the objection of counsel that the same was irrelevant, incompetent and immaterial, that the matters referred to and the agreements testified to had all merged into the written contract which was before the Court, that no testimony could be received to vary, modify or explain the terms of that contract; which objection was overruled by the Court, and counsel was then and there given an exception to such ruling and order of the Court.

### III.

The District Court for the District of Alaska, Division Number One, erred in permitting the witness Thane to testify, over the objection of counsel, that the testimony was irrelevant, incompetent and immaterial, and that the contracts between the parties had been merged into a written contract, and that no testimony could be received to vary, modify or explain the terms of that contract.

“Q. I will ask you if your advice on the requirements in the way of horse-power was requested at that time with reference to the amount of horse-power that would be necessary to the operation at Sheep Creek?

A. It was.

Q. You were more or less familiar with the general equipment at Sheep Creek?

A. I was. [1029]

Q. I will ask you if you advised them as to the amount of horse-power that would probably be required there for the operation of the mine.

A. I did.

Q. What amount does it—?

A. (By the WITNESS.) May I answer the question?

COURT.—Answer the question.

A. I advised them 300 horse-power.

Q. (By Mr. SHACKLEFORD.) Was that advice based on any estimate whatever as to the necessity of starting surges?

A. It was not.”

All of the above and foregoing testimony was received over the objection of counsel for the appellants, that the same were incompetent, irrelevant and immaterial, and no parol testimony could be received to vary, modify or explain the terms of the written contract, which objection was overruled by the Court, to which ruling and order of the Court counsel then and there excepted, which exception was then and there allowed by the Court.

#### IV.

The District Court for the District of Alaska, Division Number One, erred in permitting the witness Wallenberg, over the objection of counsel for the appellants to testify as follows:

“Q. Now, then, I will ask you, Mr. Wollenberg, have you made any inquiry to find out the power consumed at Sheep Creek prior to the fall of 1909—have you that data with you?

A. Yes.

Q. In 1909, at the time this contract was entered into? [1030]

Objection being made this question, counsel



for appellee stated the purpose of the testimony sought to be elicited to be as follows:

Mr. SHACKLEFORD.—If the Court please, we desire to prove at this time that the power consumption referred to in the letter of Mr. Bradley was subject—that a surge was necessarily implied in the offer to contract from the surrounding circumstances.”

The following objection was then and there made to the testimony and to the question asked: That the same is objected to that the testimony was incompetent, irrelevant and immaterial; that it is immaterial what representations Mr. Bradley made or did not make, since the action was not one brought to set aside the contract for false representations, for fraud; that the action, on the other hand, was one brought on the contract itself to enforce it, and that the construction of the contract would necessarily depend upon the terms of the contract itself. This objection was then and there overruled by the Court and an exception was then and there allowed the appellants to such ruling and order of the Court.

The witness then testified as follows:

“Q. (By Mr. SHACKLEFORD.) Now, just go ahead, Mr. Wollenberg, and state to the Court—

A. Why, I made an investigation of the condition of the mine prior to that time and what equipment at that time, prior to that time and find it to be as follows: There was at the beach power-house which is located at or near the site

of the present Sheep Creek plant, a compressor—

A. There was at the beach a single cylinder compressor driven by a water-wheel of approximate size 14 inches by eighteen inches, which operated at one hundred revolutions per minute [1031] and which, if the compressor called for one hundred pounds' pressure per square inch would consume one hundred horse-power. There was in addition to that a displacing compressor of approximate sized cylinder eighteen inch diameter by eighteen inch stroke which, running at one hundred revolutions per minute and compressing air under one hundred pounds to the square inch would consume one hundred and sixty-five horse-power. There was also an eighty horse-power multipolar Westinghouse generator which would consume something more than its rated output of eighty horse-power, at least eighty horse-power, in operating at normal conditions. There was also a generator of twenty-five horse-power. The total of this installed equipment was 380 horse-power.

Q. That includes the stamp-mill?

A. That is the installation of the particular units either for producing electrical energy or for compressed air at the beach power-house; and the operations of the mine at that time involved the running of a 30 stamp mill, which would require between 50 and 60 horse-power; two rock-crushers, which would require 25 horse-power; lights at various points of the camp, re-

quiring 10 horse-power; and electric hoist in the mine requiring 15; two pumps requiring at least 10, and two air hoists requiring about 25. In addition to this, the entire output of air from the compressor itself at the beach was used in operating rock drills, except, of course, the air which leaked through the pipe-line on the way to the beach from the mine. Assuming, however, that there was a large leakage and that at least five drills were necessary to the operation of the mine for the supply of its 30 stamp mill and necessary development work we would have 75 horse-power for drills. The total of these figures is 260 horse-power.

Q. That is the total consumption?

A. Accounted for.

Q. Probable total consumption from that equipment?

A. Exclusive of the line loss, that is in the air loss.

Q. (By Mr. J. HELLENTHAL.) Be how much?

A. Two hundred and sixty horse-power.

Q. (By Mr. SHACKLEFORD.) That air line—that the present air line is on the property there?

A. Well, part of it there is on the property.

Q. Not in use though?

A. It is dismantled. [1032]

Q. The compressor has been moved up—there is a new compressor installed right at the mouth of the tunnel?

A. By our company, yes.

Q. Now, assuming that the power consumption at the Sheep Creek mines in October, 1909, at the time this contract was executed, with a starting load, could that property have been operated on two hundred horse-power without considering the fact that the Treadwell Company was not going to give a starting surge?

A. Repeat the question, please.

Q. Well, assuming for the moment that it was the intention of Mr. Bradley not to give a starting surge upon the current which he proposed to give to the plaintiff company or to its compressor, could that property have either been operated or started on the two hundred horse-power provided for in the contract at the time it was drawn?

A. Well, it depends on—you would apply that two hundred horse-power to the same machines that were then in use?

Q. Yes—I am assuming—I am assuming that the plant would necessarily be reconstructed because of the change in the compressor, the ground upon which the compressor having been—on which the compressor was situated having been given over to the defendant companies?

A. Well, the compressor they had in—the large one of the two, is comparable in size with the one which we are now endeavoring to start from this current and certainly would not have been started if arranged as our compressor is

now arranged, that is driven in that way.

Q. Could it have been started with two hundred horse-power without a reasonable surge?

A. Not if installed with a motor as this one is."

All of which said evidence was received by the Court over the objection by counsel above stated, and the appellants were given an exception to the order and ruling of the Court overruling said objection. [1033]

V.

The District Court for the District of Alaska, Division Number One, erred in permitting the witness Bishop to testify, over the objection of counsel for the appellants, as follows:

"Q. Mr. Bishop, were you in charge of the Sheep Creek power plant prior to its reconstruction, with the Treadwell Company at any time?

A. I was in charge at the time it was closed down. I don't remember what year. It was six or seven years ago.

Q. You have—you know what machinery was in that power plant and what was in the Sheep Creek mine?

A. Yes.

Q. (By Mr. SHACKLEFORD.) All right, Mr Bishop, just give the machinery?

A. In the power-house?

Q. Yes, state whether in the power-house and go all over the property?

A. In the power-house at the beach there was one straight line compressor, 14-inch cylinder



in diameter and 18-inch stroke, I think—I would not be positive about the 18-inch stroke, whether 16 or 18—and there was one duplex compressor, the diameter of the cylinders were 16, and my recollection is that the stroke was also 16; and there was one 80 horse-power Westinghouse direct current 500 volt electric generator; and at one time they had a 25 horse-power direct current generator of the Sprague type, 500 volts.

Q. That is what was known as the lower power plant at Sheep Creek?

A. That was on the beach?

Q. There was another power plant up above where the intake of the lower power plant was, wasn't there?

A. Yes.

Q. Do you recollect approximately what the capacity of that plant was? [1034]

A. Well, there was installed in it a 75 horse-power Sprague generator and 75 horse-power C. & C. although they never both operated at the same time.

Q. Now, going up on the creek, what machinery was there in operation at the Sheep Creek mine?

A. At the mine?

Q. At the mill—start in the mill and going on up to the mine.

A. Well, in the mill there was one 50 horse-power C. & C. direct current 500 volt motor and

one Sprague 50 horse-power, same voltage, direct current.

Q. Beside your motor, what was there?

A. And there was a 25 horse-power motor which ran the rock-crusher in the top of the mill, and that was all of the machinery in the mill excepting a water wheel which ran the vanners.

Q. Now, outside of the motor, the generators of the motor described, what was there for this power to operate—there was a mill—what was the capacity of the mill?

A. 30 stamps in the mill.

Q. How many rock-crushers?

A. Two.

Q. How many lights, approximately, Mr. Bishop?

A. O, I suppose there was probably one hundred.

Q. What about the mining operations, what was operated in the mine proper—was there anything else in the mill besides the rock-crusher, the lights and the stamp mill?

A. Nothing.

Q. Well, now, at the mine, what was it operated by—power?

A. At the mine they used air drills, and they had two hoists which used air; they were—one was a double cylinder hoist and one was a single play—small one was a timber hoist, I believe, used only for hoisting timber; the other for hoisting the bucket. That weighed, I think,

about 500 pounds, that is, carried 500 pounds of ore.

Q. How much power was necessary to run that beach compressor—how much power would it take, approximately, Mr. Bishop? [1035]

A. Well, I don't know—I don't know that I ever calculated the hoist-power on it. I should judge that it probably took something like 150 horse-power. It was a 3-inch nozzle, usually I think it was about 3 inches, might be fraction of an inch more or less on the pipe.

Q. What was the head?

A. 270 feet."

All of which said evidence above referred to was received over the objection of counsel same as irrelevant, incompetent and immaterial, that the action was upon a written contract not ambiguous in its terms where parol evidence cannot be received to vary, modify or explain the terms of said contract in writing, which objection was overruled by the Court and appellants given an exception to said order and ruling of the Court.

## VI.

The District Court for the District of Alaska, Division Number One, erred in not permitting the witness Proebstel, after said witness had qualified as an expert and as an electrical engineer, to testify as to what is meant in electrical engineering by "a current of not to exceed 300 horse-power"; the witness having been asked the following question:

"Q. What is the meaning of the term 'current not to exceed 300 horse-power?' "

This question was objected to on the ground that the language of the contract was one of law for the Court; counsel [1036] for appellants then offered to prove by this witness the technical meaning of the terms embraced within the phrase "current of not to exceed 300 horse-power." The Court sustained the objection to the testimony offered, to which ruling and order of the Court counsel then and there excepted and an exception thereto was then and there allowed.

#### VII.

The District Court for the District of Alaska, Division Number One, erred in not permitting the witness Kinzie to testify in relation to the question of whether the appellee or its predecessors in interest had complied with the terms of the contract sued upon on their part, which refusal to so permit the witness Kinzie to testify, an exception was duly allowed by the Court; in this connection the Court further erred in not permitting the appellants to amend their answer by more definitely pleading a noncompliance with the terms of the contract on the part of the appellee. [1037]

#### VIII.

The District Court for the District of Alaska, Division Number One, erred in making Finding Number III, which is in words and figures as follows: [1038]

#### FINDING III.

That on and prior to the month of August, 1909, the International Trust Company was a corporation and in possession and control for the benefit of its

bondholders of a certain water power plant at the mouth of Sheep Creek near Juneau, in the District of Alaska, which said water power plant is more fully described in the agreement between the Oxford Mining Company, a corporation, and the defendant corporations, above named, dated October 14, 1909, which is hereinafter set forth. That the said water-power plant at and prior to said time had an installed generating equipment of 370 horse-power, and that the said water-power plant had been used for the purpose of furnishing power to what is known as the Sheep Creek Mines, which was claimed by the International Trust Company and its bondholders, and that the operation of the said mine required not less than 260 actual horse-power in uninterrupted use for its continuous operation, exclusive of any additional surges of power necessary to start the operation of the said mine and mining machinery therein installed.

And which said finding was made by the Court over the objection of the defendants that the same was contrary to the evidence, not supported by the evidence, and the finding was not within the issues in that the evidence did not show that the International Trust Company was possessed at the time referred to, or any other time, of the water-power plant, in said finding referred to, nor that said water-power plant, or any water-power plant, owned by said International Trust Company was possessed of a generating capacity or equipment of 370 horse-power, nor did the evidence show that the said International Trust Company or its bondholders claimed, at that



time, or any other time, the Sheep Creek Mines, nor did the evidence prove or tend to prove that said mine required not less than 260 actual horse-power for the operation, but the evidence, on the contrary, conclusively shows that said mine could be operated with 150 horse-power. And said finding in the whole and every part thereof relates to matters that are immaterial in this case, in that the rights of the parties depend upon a certain contract which is in [1039] writing and must rest and be determined by the terms of that contract which cannot be varied or modified by extrinsic facts, circumstances or agreements. All of which objections were by the Court overruled and to such ruling and order of the Court counsel for defendants then and there excepted, which exception was allowed by the Court. [1040]

#### IX.

The District Court for the District of Alaska, Division Number One, further erred in making its Finding No. IV, which is in words and figures as follows: [1041]

#### FINDING IV.

That prior to the month of August, 1909, the said power-plant had actually been used by the International Trust Company and its predecessors in interest for the purpose of and in connection with the generation of power for the operation of the said Sheep Creek mines, which said mines were provided with railways, trams, compressors, lighting plant, two rock-crushers, one 30-stamp mill, two hoists and other ordinary appliances used in connection with the operation of a mine.

Defendants objected to the making of Finding No. IV on the ground that it was contrary to the evidence, not supported by sufficient evidence, and not within the issues, more expressly so for the reasons following, that the rights of the parties depend upon the construction and terms of a certain written contract sued upon, and that all the matters and things referred to in the finding are immaterial and outside of the issues, in that the said contract or contracts cannot be varied, modified or explained by extrinsic facts, which said objection, and each of them, were then and there overruled by the Court, to which ruling and order of the Court defendants by counsel then and there excepted, which exception was then and there allowed by the Court.

#### X.

The District Court for the District of Alaska, Division Number One, erred in making Finding No. V, which is in words and figures as follows: [1042]

#### FINDING V.

That on and prior to August, 1909, the International Trust Company was not only in possession and control of the said Sheep Creek power-plant, but was also in possession and control of mines near Juneau, Alaska, known as Silver Bow Basin Mines, including the Ground Hog group of mines, and also claimed equitable title to the Sheep Creek group of mines before mentioned, which said latter group the said power-plant had theretofore been used to operate.

That the defendants object to making of said Finding No. V, on the ground that it was contrary to the evidence and not supported by sufficient evidence,

and that the finding was not within the issue, for the special reason, among others, that the rights of the parties must be determined in accordance with a written contract sued upon which cannot be varied, modified or explained by extrinsic facts or circumstances, or by any of the matters or things related to in said findings, which objection was then and there overruled by the Court, to which order and ruling of the Court defendants by counsel then and there excepted, which exception was then and there allowed by the Court.

## XI.

The District Court for the District of Alaska, Division Number One, erred in making Finding No. VI, which is in words and figures as follows: [1043]

That in the month of August, 1909, F. W. Bradley approached L. P. Shackelford, the attorney for the International Trust Company, and also attorney for the defendant companies herein, and stated that it was the desire of the defendant corporations to secure possession and control of the said Sheep Creek power-plant and construct upon the mill sites, upon which said power-plant was situated, a water-power plant of substantial size and efficiency of a producing capacity of about 3,000 horse-power, and that it was the desire of the defendant corporation upon the construction of such power-plant to provide that the said International Trust Company or its successors have sufficient power to operate the mines claimed by the International Trust Company known as the Sheep Creek mines and accept in exchange a deed for the Sheep Creek power-plant. That at said time the

said F. W. Bradley was consulting engineer of the defendant companies and had full charge of their operations, constructions and development, with full authority to represent the said companies, and with him at that time was H. H. Taylor, the then president of the defendant companies, who concurred in the representations of said F. W. Bradley. That the said F. W. Bradley at said time represented that an uninterrupted current of 200 horse-power continuously at the disposition of the said International Trust Company, or its assigns, would operate the Sheep Creek mines, and that said statement referred to the ordinary electric load necessary to the operation of the mines and the mining machinery appurtenant thereto, and did not include an estimate of the amount of power momentarily necessary to start machinery that would uninterruptedly consume or use 200 horse-power. That thereupon a draft of a contract between the defendants herein and a company to be organized by the International Trust Company was drawn at Juneau, Alaska, upon the dictation and approval of the said F. W. Bradley, and the defendant companies for presentation to the International Trust Company and its bondholders, which said draft was in words and figures identical with the contract of [1044] October 14, 1909, between the Oxford Mining Company and the defendant companies, hereinafter set forth, except that where the words "three hundred horse-power" appear in the body of the said contract of October 14, 1909, the words "two hundred horse-power" originally appeared in the body of said contract, and that after



the said draft of the said contract had been made said F. W. Bradley wrote a letter to Henry Endicott, the principal bondholder interested in the said power-plant, in words and figures as follows, to wit:

“Treadwell, Alaska, August 10, 1909.

Henry Endicott, Esq.,

101 Tremont Street,

Boston, Mass.

Dear Sir:

We have been talking to Mr. L. P. Shackleford about your water right on Sheep Creek in this district and both *me* and ourselves have agreed upon what we consider an extremely fair proposition our concession have been drawn up in the shape of a document which Mr. Shackleford will present to you as it is now this sheep creek water power is in jeopardy and can be taken at any time by adverse interests our proposed arrangement will preserve your rights while at the same time developing them and making the most use of them. I presume you are holding this water right for the value that it has had and may have in the future for working the sheep creek mines and thirty stamp mill connected therewith estimating conservatively 150 HP is all the power these mines and mills ever required for their past operations. The mill is amply large enough for the mine and surely two hundred H. P. will more than take care of future requirements if the proposition is all acceptable to you we would begin immediate work thereby preserving your rights and returning you some monthly income the proposition pro-



vides ample time in which you could decide either to sell the property outright or take two hundred H. P. for the operation of the mines and mill, yours very truly,

F. W. BRADLEY."

At the request of said F. W. Bradley the said L. P. Shackleford departed for Boston to present the said draft of agreement to the said Henry Endicott and the International Trust Company.

Defendants objected to making of said Finding No. VI, on the ground that it is contrary to the evidence, not supported by sufficient evidence, and that finding was not within the issues, for the following reason, among others, that the contract sued upon is in writing, that the negotiations, agreements and understandings had between the parties prior to its execution are immaterial, that the terms of the contract cannot be varied, explained or modified by extrinsic [1045] evidence or by facts or circumstances referred to in the Court's findings, all of which objections were then and there overruled by the Court, to which order and ruling of the Court defendants by counsel then and there excepted, which exception was then and there allowed by the Court.

## XII.

The District Court for the District of Alaska, Division Number One, erred in making Finding No. VII, which is in words and figures as follows: [1046]

### FINDING No. VII.

That upon the presentation of the said draft of agreement by the said L. P. Shackleford, the parties

interested in the said power-plant made an investigation as to the amount of power actually needed by them in continuous operation, exclusive of the amount necessary for any momentary starting surges for their machinery, which matter of surges was not discussed between the parties to the contract, and ascertained that they would need the continuous use of 300 horse-power, and accordingly the said Henry Endicott sent to the said F. W. Bradley the following telegram:

“Boston, August 23, 1909.

F. W. Bradley,  
Wardner, Idaho.

Will lease power on terms proposed subject to consent trust company if three hundred horse power is substituted for two hundred.

HENRY ENDICOTT.”

And received in reply thereto from the said F. W. Bradley the following telegram:

“Henry Endicott:

You may substitute three hundred for two hundred horse power may I cable Sup’t Kinzie to begin immediate protection measure.

F. W. BRADLEY.”

Thereafter the said International Trust Company and the bondholders beneficially interested in the said property transferred the said property to the said Oxford Mining Company and caused the said Oxford Mining Company to make and execute an agreement with the defendants, above named, which said agreement was also made and executed by the defendants, which said agreement was and is in the fol-

lowing words and figures, to wit: [1047]

THIS INDENTURE AND AGREEMENT made and entered into this 14th day of October, 1909, by and between OXFORD MINING COMPANY hereinafter called the lessor and the Alaska Treadwell Gold Mining Company, the Alaska Mexican Gold Mining Company and the Alaska United Gold Mining Company hereinafter called the lessees.

WITNESSETH.—First, the lessor has this date and does by these presents lease unto the lessees all of the following described real property situated on and near Sheep Creek in the Harris Mining District, District of Alaska, to wit:

The Mexico Mill-site U. S. Mineral Entry No. 25, lot 71B. The Bellvidere Mill-site U. S. Mineral Entry No. 25, lot 72B. The Jumbo Mill-site U. S. Mineral Entry No. 60, lot No. 260. Also that certain piece or parcel of land beginning at a stake identical with post No. 2 Jumbo Mill-site U. S. Survey No. 260 on the meander line of Gastineau Channel, thence first course along the meander line of Gastineau Channel at ordinary high water mark N. 52.00' W. 54 feet to stake No. 2; thence second course N. 48 15' E. 200 feet to stake No. 3; thence S. 52.00' E. 54 feet to the N. W. side line of Jumbo Mill-site, U. S. Survey No. 260 to stake No. 4; thence S. 46 15' West along the Northwest side line Jumbo Mill-site U. S. Survey No. 260, 200 feet to stake No. 1, the place of the beginning containing an area of one quarter of an acre more or less courses expressed from the true meridian, Mag. Var. 29. 30'; and also that certain water right known as the Sheep Creek Water Right

and located on Sheep Creek about three-quarters of a mile from its mouth, together with the flume and pipe line connecting the same with the beach near the mill at the mouth of the said Sheep Creek; also the saw-mill, boarding house, lumber sheds, wharf landing, mill dam, flumes, penstocks, waterwheels, and all other machinery and appliances used in connection with said saw-mill, situated near the mouth of said Sheep Creek, together with all machinery, tools, equipment, plants of every kind and description now upon said property [1048] for a term of ten (10) years from the date hereof at a monthly rental of One Hundred and Twenty-five (\$125.00) Dollars per month, payable in gold coin of the United States on the first day of each month during the term of said lease at the office of the lessees at Treadwell, Alaska; and it is hereby agreed, that if any rent shall be due and unpaid, or if default shall be made in any of the covenants herein contained, that it shall be lawful for the lessor to re-enter said premises and remove all persons therefrom, and the lessees do hereby covenant, promise and agree to pay the lessor the said rent in the manner hereinbefore specified, and not to let or underlet the whole or any part of said premises without a written consent of the lessor, nor to assign this lease or any part thereof without said written consent, and at the expiration of said term the party of the second part will quit and surrender said premises in as good state and condition as the same now are.

It is the intention of the lessees to erect, equip and maintain upon said premises a water-power plant of



substantial size and efficiency for the generation of electric power, and if at any time after two (2) years from the date hereof the lessor or its assigns shall elect to take a current of not to exceed three hundred (300) electric horse-power which shall be taken from and at the generating plant to be installed upon the leased premises hereinbefore described, the lessees undertake, covenant and agree to deliver said current to the lessor or its assigns upon the execution and delivery by the lessor or its assigns to the lessee of a deed or deeds conveying said leased property herein described to the party of the second part. If prior to the expiration of nine years from the date hereof the lessor does not elect to convey to lessees or their assigns the property herein leased and accept in full consideration therefor the right to the use of the three hundred (300) electric horse-power hereinbefore mentioned, the lessees may at their option prior to the expiration of the ten (10) years provided in this lease purchase the property herein leased absolutely from the lessor [1049] by paying to the lessor the sum of Twenty-five Thousand Dollars (\$25,000.) in gold coin of the United States; and the lessor covenants and agrees upon tender of said sum of Twenty-five Thousand Dollars (\$25,000.) to execute and deliver such deeds of conveyance to the property herein leased as hereinbefore specified, excepting only as to the title to (1) and one quarter acre tract hereinbefore described and (2) the premises occupied and used by the existing wharf of the lessor to both of which the lessor now asserts only possessory titles. The lessees may at their own



cost and expense undertake to perfect the said titles and should lessee wish so to do the lessor shall lend all proper assistance in its power including the using of its name, and should the said titles be so perfected to the said premises or either of them they shall become the property of the lessor and remain covered by this lease and subject to all terms and conditions thereof.

The covenants herein contained shall be construed as running with the land and as a charge thereon, so, that any successor or successors in interest to the lessor and or lessees who may acquire any interest in and to the titles to the said land shall be bound by this conveyance in the same manner as if they had executed this agreement; and the lessees hereof may require at their option that the property herein described be conveyed by the lessor to a responsible Trustee for the purpose of carrying out the terms of this agreement, or that deeds and conveyances covering the property herein leased by placed in escrow so as to ensure delivery of the same if required under the provisions of any of the covenants of this lease.

If neither of the options herein provided for are accepted by either the lessor or lessees then the property and rights herein described with all the improvements that are or that may hereafter be placed on the said premises shall be and become the property of the lessor. [1050]

The provisions herein as to the delivery of three hundred (300) horse-power at the generating plant to be installed on the premises herein described contemplates the delivery of an uninterrupted current, but the lessees shall not be liable for damages that

may arise from operating and physical causes beyond its control.

IN WITNESS WHEREOF the parties hereto have hereunto set their hands and seals the day and year first above written. (Executed in triplicate.)

Witness:

HAROLD LAWRENCE.

WALTER W. BLACK.

OXFORD MINING COMPANY.

By WALLACE HACKETT,  
President.

And HENRY ENDICOTT,  
Treasurer.

[Seal Oxford Mining Company.]

ALASKA TREADWELL GOLD MINING  
COMPANY.

By H. H. TAYLOR,  
President.

F. A. HAMMERSMITH,  
Secretary.

ALASKA MEXICAN GOLD MINING  
COMPANY.

By H. H. TAYLOR,  
President.

F. A. HAMMERSMITH,  
Secretary.

ALASKA UNITED GOLD MINING COM-  
PANY.

By H. H. TAYLOR,

President.

F. A. HAMMERSMITH,

Secretary.

[Seal Alaska Treadwell Gold Mining Company.]

[Seal Alaska Mexican Gold Mining Company.]

[Seal Alaska United Gold Mining Company.]

COMMONWEALTH OF MASSACHUSETTS,  
COUNTY OF SUFFOLK,  
CITY OF BOSTON,—ss.

Be it remembered that on this 14th day of October, 1909, before me, the undersigned, a Notary Public, in and for said County and State, personally appeared Wallace Hackett, President, and Henry Endicott, Treasurer, of the Oxford Mining Company, a corporation organized [1051] under the laws of the State of Maine, to me known to be the individuals described in and who executed the foregoing instrument as such President and Treasurer and said Henry Endicott having affixed the seal of said corporation to said instrument, they severally acknowledged to me that he Wallace Hackett, as President, and he, Henry Endicott, as Treasurer of said Corporation executed the foregoing instrument for and on behalf of said Corporation, as the free and voluntary act of said Corporation for the uses and purposes therein set forth. Then the said Henry Endicott being by me first duly sworn, on his oath states that he is the Treasurer of said Corporation, is acquainted and is the custodian, and has in his pos-

session the corporate seal of said Corporation and that the seal hereinbefore affixed is the corporate seal of said Corporation and was affixed by him as such Treasurer by order of the Board of Directors of said Corporation.

IN WITNESS WHEREOF I have hereunto set my hand and seal the date and year first above written.

[Notarial Seal] (Signed) LLOYD A. FROST,  
Notary Public.

My Commission expires Dec. 5th, 1913.

STATE OF CALIFORNIA,  
CITY AND COUNTY OF SAN FRANCISCO,—ss.

On the 12th day of November in the year one thousand nine hundred and nine, before me, P. J. Kennedy, a Notary Public, in and for said City and County, residing therein, duly commissioned and sworn, personally appeared H. H. Taylor and F. A. Hammersmith, known to me to be the President and Secretary respectively of Alaska Mexican Gold Mining Company and Alaska United Gold Mining Company, the corporations that executed the within *in* foregoing instrument, and to be the officers who executed the said instrument on behalf of said Corporations therein named, and they acknowledged to me that such corporations executed the same. [1052]

IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal at my office in the said City and County of San Francisco, the day

and year last above written.

(Signed) P. J. KENNEDY,  
Notary Public in and for the City and County of San  
Francisco, State of California.

State of California,  
City and County of San Francisco,—ss.

On this 12th day of November in the year One Thousand Nine Hundred and Nine, before me, P. J. Kennedy, a Notary Public, in and for said City and County, residing therein, duly commissioned and sworn, personally appeared H. H. Taylor and F. A. Hammersmith, known to me to be the President and Secretary, respectively, of Alaska Treadwell Gold Mining Company, the Corporation that executed the within and foregoing instrument, and to be the officers who executed the said instrument on behalf of said Corporation therein named, and they acknowledged to me that such Corporation executed the same.

IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal at my office in said City and County of San Francisco, the day and year last above written.

[Notarial Seal]

(Signed) P. J. KENNEDY,  
Notary Public in and for the City and County of  
San Francisco, State of California. [1053]

And the Court finds from the surrounding circumstances that it was the intention of the said Oxford Mining Company and of the defendant companies to provide to the said Oxford Mining Company the beneficial and uninterrupted use of 300 actual horsepower, including such starting surges and other con-



ditions which would reasonably insure to the said Oxford Mining Company and its successors the right to use 300 actual horse-power in connection with the ordinary machinery used in mining and the ordinary forms of induction motors in common use in mining for loads of 300 horse-power or less. The Court further finds that for loads of 300 horse-power or less induction motors having an inherent phase displacement and power factor less than unity were in ordinary and practical use in mining, and that the use of said ordinary and practical machinery in mining operations was contemplated by the defendants at the time of the execution of the contract, and that the power contracted for was 300 actual horse-power as distinguished from 300 apparent horse-power, and that the contract contemplated the practical and beneficial use of 300 actual horse-power as ordinarily spoken of and ordinarily measured by common and ordinary instruments for the measurements of horse-power. The Court further finds that the common and ordinary instrument and device in universal use for the measurement of horse-power was and is the wattmeter, which measures actual as distinguished from apparent power.

The Court further finds that in making the said contract the said Oxford Mining Company relied, and had a right to rely, upon the representations made by the said defendant companies to the effect that it was the purpose of defendant companies to furnish the amount of power stipulated in the contract in real, actual and practical working efficiency, together with such momentary surges necessary to

start the machinery of the Oxford Company, or its successor, the uninterrupted use of 300 real horse-power to be used in connection [1054] with ordinary motors commonly used upon loads of 300 horse-power or less, including induction motors.

Defendants objected to making of said Finding No. VII on the ground that it is contrary to the evidence, not supported by sufficient evidence, and that the finding was not within the issue, more expressly for the following reason, and in the following particulars: That that portion of the finding preceding the contract as set up in said finding is immaterial and not within the issue of the case, for the reason that the contract between the parties was in writing and could not be varied, explained or modified by the extrinsic facts or circumstances referred to in the finding, all of such matters having merged in the contract itself. And that portion of the finding which follows the contract as set out therein is more expressly objected to for the reasons following, that the Court finds from the surrounding circumstances that it was the intention of the parties to provide the Oxford Mining Company with the beneficial and uninterrupted use of the 300 actual horse-power, including such starting surges and . . . . . which would reasonably insure to the said Oxford Mining Company and its successors the right to use 300 actual horse-power in connection with the ordinary machinery used in mining and the ordinary forms of induction motors in common use in mining for loads of 300 horse-power or less. In this portion of the finding the Court finds what the intention of

the parties was not from the contract itself, but from the surrounding circumstances, and, in effect, makes between the parties a contract different from that which they had themselves made in writing. The Court then finds that certain forms of induction motors having an inherent phase displacement and a power factor less than unity were in common use and were contemplated by the defendants at the time of the execution of the contract. This portion of the finding is also immaterial and not based upon any evidence whatsoever. The Court then finds that the power contracted for was 300 actual horse-power as distinguished [1055] from 300 apparent horse-power, and that the contract contemplated the practical and beneficial use of 300 actual horse-power as measured by wattmeter. This portion of the finding is objectionable, more expressly in this, that if it is based upon a construction of the contract itself, the contract is erroneous; if based upon evidence outside of the contract, it is immaterial, since the contract cannot be varied, explained or modified by such evidence, and in any event, the same is not supported by any evidence in the case. The Court then proceeds to find that the Oxford Mining Company had a right to rely upon the representations made by the defendant companies, to the effect that it was the purpose of the defendant companies to furnish the amount of power stipulated in the contract in real, actual and practical working efficiency, together with such momentary surges necessary to start the machinery of the Oxford Company or its successors, the uninterrupted use of 300 real horse-

power to be used in connection with ordinary motors commonly used upon loads of 300 horse-power or less, including induction motors. The objection to this portion of the finding is more especially that there is no evidence upon which to base it, no such representations having been made. Further that the Court speaks for itself as to what is to be furnished, and that if the finding is intended as a construction of the contract itself, it is erroneous in that the contract provides for the furnishing of a current of not to exceed 300 horse-power, and does not provide for the delivery of power at all, and that if said finding is not based upon the contract itself but upon extrinsic evidence, then the same is immaterial and not within the issue in the case, for the reason that the terms of the written contract sued upon cannot be varied, modified or explained by intrinsic facts or evidence, and the relief of the parties, if any, might be measured by the terms of that contract itself. Each and all of which said objections were overruled by the Court, to which ruling and order of the Court counsel for the defendants then and there excepted, which exception was allowed by the Court. [1056]

### XIII.

The District Court for the District of Alaska, Division Number One, erred in making Finding No. VIII, which is in words and figures as follows:

#### FINDING VIII.

The Court further finds that the defendant corporations herein completed the construction of the water-power plant provided for in the said agree-



ment of October 14, 1909, prior to the 31st day of October, 1910, and that on the 31st day of October, 1910, the said Oxford Mining Company elected to take the 300 horse-power provided for in the said agreement for its full benefit and practical and uninterrupted use, and elected to convey the property heretofore described in the said contract of October 14, 1909, to the defendant corporations, and that the defendant corporations accepted said election and waived the two years' time prescribed in said contract for the making of the said election, and that the said Oxford Mining Company duly conveyed to the defendant corporations all of the property described in the agreement of October 14, 1909, on or about the 22d day of April, 1911. The Court further finds that from the 22d day of April, 1911, to the 8th of November, 1912, the Oxford Mining Company, or its successors, did not receive any of the power contracted for from the defendant corporations.

To the making of Finding VIII defendants objected, on the ground that it is contrary to the evidence, not supported by sufficient evidence, and the finding was not within the issues, more especially for the reason that the contract between the parties is in writing and the terms of the contract speak for themselves as to the rights of the respective parties, that the same cannot be varied, modified or explained by extrinsic evidence, or by any extrinsic facts or circumstances. [1057] Objection is further made to that portion of the finding which relates to the failure to deliver power before November, 1912, for the reason that the evidence conclusively shows that



no demand for power or current was made during that period and no complaint was made because power or current was not, during that period, delivered. Each and all of which said objections were overruled by the Court, to which ruling and order of the Court counsel for the defendant then and there excepted, which exception was allowed by the Court.

#### XIV.

The District Court for the District of Alaska, Division Number One, further erred in making Finding No. IX, which is in words and figures as follows:

#### FINDING IX.

On or about the 1st of June, 1912, the Oxford Mining Company sold its property and property rights in Southeastern Alaska to the plaintiff company, including the rights growing out of the said contract of October 14, 1909, and the Court further finds that the plaintiff company is engaged in developing its mines in Sheep Creek and Silver Bow Basin, both from the Sheep Creek and Silver Bow Basin side, and is engaged in pushing its development work as rapidly as possible, and that the said prosecution of the said development work involves the speedy application of the power available to the plaintiff company, and that if the plaintiff company is deprived of said power, its progress will be greatly delayed and interest burdens upon its bonds and other expenses will be greatly increased; and that there is no other source of power for the carrying on of the plaintiff's development work, and that the plaintiff

[1058] will be greatly and irreparably damaged if it is deprived of the power provided for in the said contract of October 14, 1909, and that said damage cannot be compensated at law or ascertained.

To the making of said Finding No. IX, defendants object, on the ground that it is contrary to the evidence, not supported by sufficient evidence and the finding is immaterial and not within the issue, which objections were each and all, then and there, overruled by the Court, to which ruling and order of the Court the defendants then and there excepted, which exceptions were then and there allowed by the Court.

#### XV.

The District Court for the District of Alaska, Division Number One, erred in making Finding No. X, which is in words and figures as follows: [1059]

#### FINDING NO. X.

That the arrangements for the development of the plaintiff's mining property were made in reliance upon the contract of the defendant corporations herein that they would furnish an uninterrupted current of 300 electric horse-power for the actual and practical use of the plaintiff corporation, and that relying upon said contract and representations of the defendants, the plaintiff engaged a force of over 175 men to perform its underground development work in its Perseverance mine at Silver Bow Basin, and that the daily expense of maintaining said working force is \$750.00, and that the plaintiff has outstanding bonds in the principal sum of \$3,500,000.00 upon which interest is accumulating and upon which no interest can be paid until the

development work of the plaintiff company is completed. That the deprivation of the plaintiff of the power so contracted for will greatly delay the date when the mines of the plaintiff company will become productive, and will cause the plaintiff herein to discharge a number of its laborers, and it will be difficult to secure further laborers upon the resumption of the plaintiff's work unless the same are kept continuously at work.

That the defendants objected to the making of said finding on the ground that the same was contrary to the evidence, not supported by sufficient evidence, and was not material and not within the issues, which said objections were then and there overruled by the Court, to which ruling and order of the Court the defendants, by counsel, then and there excepted, which exception was allowed by the Court. [1060]

#### XVI.

The District Court for the District of Alaska, Division Number One, erred in making Finding No. XI, which is in words and figures as follows:

#### FINDING XI.

The prior to the 8th of November, 1912, the defendant companies were notified of the assignment of the rights of the Oxford Mining Company to the plaintiff and were requested to deliver the uninterrupted current of 300 horse-power for the use of the plaintiff; and that prior to the 8th of November, 1911, there had been installed upon the property of the plaintiff in Silver Bow Basin at its Perseverance Mine a 200 horse-power motor of the usual type in mining operations of like character throughout the

United States and in the Juneau Mining District, which said motor was connected with an Ingersoll-Rand compressor using 165 horse-power at 80 pounds pressure, and that there had been installed at the Sheep Creek plant of the company a 150 horse-power motor and a 20 horse-power motor; and that in connection with the 150 horse-power motor there was used a compressor of 165 horse-power for the purpose of driving an adit tunnel from the Sheep Creek mines to a point underneath the Ground Hog and Perseverance mines; and that on the 8th of November, 1911, the defendant corporations had connected their power-plant with the transmission line of the plaintiff company and set in their power-house a so-called automatic circuit-breaker, which said circuit-breaker was set so as to break a circuit when a maximum of between 80 and 100 amperes was being drawn over the transmission line of the plaintiff company. That from the 8th day of November, 1912, to the 2d day of December, 1912, the machinery above described at Sheep Creek was operated without difficulty from said current so supplied by the defendant corporations, and the setting [1061] of the said circuit-breaker proved sufficient to produce a sufficient practical working efficiency at the power-house of the defendant company of three hundred horse-power. That on the 2d day of December the machinery of the plaintiff company in the Silver Bow Basin or Perseverance mine were also placed upon the said circuit and successfully operated until the 4th of December, when the operations of the Perseverance mine were



temporarily suspended by reason of a fire which destroyed a 100-stamp mill of the plaintiff company at that point. That between the 4th and 6th of December, 1912, one Proebstal, an electrician of the defendant companies, visited the Sheep Creek power-house and reduced the setting of the circuit-breaker to a point which would throw the same out and break the current when more than 60 amperes were drawn through said circuit. The voltage being maintained at about 2300. That the said circuit-breaker so installed is not of the usual ordinary type used upon feeders leaving power-houses but is what is known as an instantaneous circuit-breaker; that the ordinary and usual type of circuit-breaker placed upon feeders leaving direct from power-houses is what is known as a thirty second time relay circuit-breaker, which guards against the circuit-breaker being thrown out by momentary and unavoidable surges of current. That the starting of machinery which will consume a given amount of power often causes what is known as a starting surge, which lasts from ten to thirty seconds, but from a practical standpoint is not taken into account or charged for in electrical connections, and is disregarded and provided against by the use of the ordinary type of time relay circuit-breaker. That in the Juneau Mining District it is not customary for the defendant companies to charge any other customer for the necessary starting surges for machinery connected with the said power plant of the defendant companies, but that the power is measured upon the amount taken under normal conditions, that is to say, by the



amount of power taken after the machinery is started and in operation. [1062]

In making of which said Finding No. XI defendants objected on the ground that the same was contrary to the evidence, not supported by sufficient evidence, was not within the issues and immaterial, which objections go more especially to the following particular features of the finding:

That the Court finds that an instantaneous circuit-breaker is not the usual ordinary type in use upon feeders leaving power-houses, but that the ordinary type in use is a thirty second relay circuit-breaker. This part of the finding is contrary to the evidence and is immaterial, the question in the case being not what machinery is ordinarily used, but whether the quantity of current furnished complies with the conditions of the contract.

The Court further finds that it is not customary for the defendant companies to charge other customers for necessary starting surges. This part of the finding is immaterial, and is directly contrary to all the evidence in the case, the undisputed evidence showing that the defendant companies have no other customer or customers whatsoever; that they are not furnishing electric current to anyone except the plaintiff, with this exception, that they are accommodating the Alaska Juneau Mining Company, a corporation under the same management, by temporarily supplying them with current at a high rate, and there is no evidence to show that the Alaska Juneau Mining Company, at any time, used starting surges or current that were not paid for.

Each and all of said objections were then and there overruled by the Court, to which ruling and order of the Court defendants, by counsel, then and there objected, which objection was then and there allowed by the Court. [1063]

## XVII.

The District Court for the District of Alaska, Division Number One, further erred in making Finding No. XII, which is in words and figures as follows:

### FINDING No. XII.

That in establishing the circuit between the plaintiff and the defendant companies the defendant corporations have set their instantaneous circuit-breaker upon a theoretical basis of what is known as unity power factor, that is to say, the defendants have not installed a wattmeter upon said circuit nor set the circuit-breaker upon observations taken from an ammeter and their other meters, such as volt and ampere meters, at the time the wattmeter indicates a consumption of 300 horse-power, but that they have assumed that the power factor of the said circuit is 100 per cent, and multiplied the same by the voltage of 2300 volts and by the constant attributed to a three-phase electric current. The Court further finds that there is no circuit upon the power lines of the defendant companies, either in connection with the plaintiff or any of their other lines, which has a power factor of unity or 100 per cent. And the Court further finds that at the present time there are no motors other than induction motors used in connection with the power plant of defend-

ant companies. The Court further finds that wherever an induction motor is used the power factor is less than unity and the actual and effective horsepower passing over any circuit under such conditions can only be measured by a wattmeter and the circuit-breakers in connection with such circuits set in accordance with observations taken from a wattmeter. The Court further finds that in the summer of 1912 the defendants ordered a curve drawing wattmeter to be placed upon the switch-board [1064] of the circuit between the plaintiff and the defendant companies, and that the same is in possession of the defendants but the defendants have not installed said wattmeter. And the Court further finds that the defendants have refused to allow the plaintiff to install a wattmeter upon the panel at the power-house of the defendant companies, at which panel connection is made between the transmission line of the plaintiff and the power-house of the defendant companies. The Court further finds that in estimating and measuring the power used by the defendants themselves upon their own circuits the defendants use a wattmeter. The Court further finds that the wattmeter is the common ordinary and universal device used in measuring horse-power.

That the defendants objected to making Finding No. XII, on the ground that it is contrary to the evidence, not supported by sufficient evidence, on the ground that the finding is not material and not within the issues, each and all of which said objections were overruled by the Court, to which ruling and order of the Court defendants, by counsel, then

and there excepted, which exceptions were then and there allowed by the Court.

### XVIII.

The District Court for the District of Alaska, Division Number One, further erred in making Finding No. XIII, which is in words and figures as follows: [1065]

### FINDING No. XIII.

The Court further finds that it is the common practice where a certain amount of horse-power is normally used, for the producing company to allow a reasonable starting surge to the consumer sufficient to start and put in operation machinery which will normally consume the current provided for.

Defendants objected to the making of Finding No. XIII, on the ground that it is contrary to the evidence, not supported by sufficient evidence, and that it is immaterial and not within the issues of the case; that whatever might be the custom relating to starting surges, this custom would not affect the right of parties in this case, in view of the facts that the rights of the parties are limited and defined by a written contract, explicit in its terms. Each and all of which said objections were then and there overruled by the Court, to which ruling and order of the Court defendants, by counsel, then and there excepted, which exceptions were allowed by the Court.

### XIX.

The District Court for the District of Alaska, Division Number One, further erred in making Finding No. XIV, which is in words and figures as follows: [1066]



## FINDING XIV.

The Court further finds that on or about the 13th day of December, 1912, an electric current was again turned on to the operation of the machinery at the Perseverance mine and the machinery continued to operate until the night of the 24th of December, when the mine shut down for Christmas Day, and that since said time the plaintiff has been unable to start the machinery at the Perseverance mine with the current provided by the defendant except under orders of the Court requiring the defendants to hold in their circuit-breaker during the momentary starting surge.

Said Finding No. XIV was objected to by counsel for the defendants on the ground that the same was contrary to the evidence, not supported by sufficient evidence, and the finding was immaterial and not within the issues. The matters related to in the finding are especially immaterial, for the reason that the contract provides that a certain quantity of current shall be furnished, and the question of whether such current is made effective or what is done with it in no wise affects the rights of the parties, which said objection was then and there overruled by the Court, to which order and ruling of the Court defendants, by counsel, then and there excepted, which exceptions were allowed by the Court. [1067]

## XX.

The District Court for the District of Alaska, Division Number One, further erred in making Finding No. XVI, which is in words and figures as follows:



FINDING No. XVI.

The Court further finds that the defendants herein have adopted the practice, whenever the said instantaneous circuit-breaker is thrown out, of requiring the plaintiff to notify the defendant corporations at their head office at Treadwell, Alaska, a point about two miles distant from the Sheep Creek power plant and across Gastineau Channel, an arm of the North Pacific Ocean, and that the defendants refuse to allow their electricians at the Sheep Creek power plant to restore the circuit-breaker whenever the same goes out, but require that they be notified at their head office at Treadwell and then send a man across Gastineau Channel to replace the circuit-breaker, and that this practice deprives the plaintiff of an uninterrupted current for periods covering from one to eight hours whenever the said circuit-breaker goes out. The Court finds that at no time since the 6th day of December, 1912, except during the momentary starting surges hereinbefore described, have the defendants furnished the plaintiff with as much as the 300 horse-power provided for in the said contract, and further finds that the defendants have failed to provide the plaintiff with an uninterrupted current of 300 horse-power.

Said finding was objected to by counsel for the defendants on the ground that the same was contrary to the evidence, not supported by sufficient evidence, and was immaterial and not within the issues in the case. That portion of the Court's finding where it finds that the [1068] defendants have not since the 6th day of December, 1912, except in the momen-

tary starting surges in the findings referred to, furnished the plaintiff with 300 horse-power provided for in the contract, or have failed to furnish the plaintiff with an uninterrupted current of 300 horse-power is wholly unsupported by the evidence, contrary to the evidence and conflicting with other findings made by the Court. All of which said objections were overruled by the Court, to which order and ruling of the Court defendants, by counsel, excepted, which exceptions were then and there allowed by the Court.

## XXI.

That the District Court for the District of Alaska, Division Number One, erred in making Finding No. XVII, which is in words and figures as follows: [1069]

### FINDING No. XVII.

The Court further finds that at the time the said contract of October 14, 1909, was executed neither the Oxford Mining Company nor its predecessors in interest had any other power plant with which to connect the said current of 300 horse-power, and that no other plant was in contemplation at that time, and that it was the intention of the defendants to provide for the actual and beneficial use of a current of 300 real horse-power at the power plant of the defendant corporation, and that from the surrounding circumstances a starting surge was naturally to be implied or presumed, and that without a starting surge (in connection with induction motors, which the Court finds is the ordinary type of motor in mining use, for loads of 300 horse-power or less),

the practical and beneficial use of more than 100 horse-power could not have been obtained. The Court further finds that under the conditions existing aforesaid at the time the contract was executed the parties could not have contemplated the uninterrupted delivery of 300 horse-power provided for in the contract unless a starting surge was implied in the said contract.

The defendants objected to said Finding No. XVII on the grounds that the same is contrary to the evidence, was not supported by sufficient evidence, and that said finding was immaterial and not within the issues. The objection to this finding being more especially that the fact that the first part of the finding relating to the fact that the Court finds that [1070] the current to be furnished in the contract was one of real or developed horse-power as distinguished from a current from which 300 horse-power can be developed, such construction is erroneous, and if regarded as a finding based upon extrinsic evidence is immaterial, in view of the fact that the rights of the parties are determined by the terms of the written contract sued upon, which is in evidence, and that part of Finding No. XVII which the Court finds from surrounding circumstances that the starting surge was naturally to be implied or presumed, and that without a starting surge in connection with induction motors, which the Court finds to be the ordinary kind of motor in mining use for loads of 300 horse-power or less, the practical and beneficial use of more than 100 horse-power could not have been obtained, was wholly contrary to the evidence,

and further is immaterial and not within the issues, since the rights of the parties must be determined from the contract itself, and by that contract the current to be furnished is limited to a current of not to exceed 300 horse-power; and that further portion of the Court's finding in which the Court finds that the parties could not have contemplated the uninterrupted delivery of 300 horse-power provided for in the contract unless a starting surge was implied, is open to the same special objections last mentioned, all of which said objections were then and there overruled by the Court, to which ruling and order of the Court, defendants by counsel then and there excepted, which exception was allowed by the Court. [1071]

## XXII.

The District Court for the District of Alaska, Division Number One, erred in making Finding No. XVIII, which is in words and figures as follows:

### FINDING No. XVIII.

The Court further finds that an inverse time relay circuit-breaker which will resist ordinary overloads for the period of thirty seconds is the usual, common and proper device for maintaining connections upon lines leaving power-houses, and that such circuit-breaker should be installed upon the switch-board of the defendant companies so as to protect the defendant companies from short circuits, yet provide enough resistance to prevent the circuit between the plaintiff and defendant companies from being broken under ordinary starting surges.

Which said Finding No. XVIII was objected to



by defendants on the ground that it is contrary to the evidence, not supported by sufficient evidence and is immaterial and not within the issues.

That said finding is objectionable more especially in that it is immaterial whether or not a time relay circuit-breaker is the proper device under the circumstances related to in the finding, since the contract sued upon does not provide for excessive currents of any duration, but explicitly limits the current to one of not to exceed 300 horse-power; and further, that it is not within the province of the Court [1072] to determine what device or machine is proper or not proper, the only question being whether the current furnished complies with the conditions of the contract. Each and all of said objections were then and there overruled by the Court, to which ruling and order of the Court defendants by counsel then and there excepted, which exception was then and there allowed by the Court.

### XXIII.

That the Court erred in concluding as indicated by its first conclusion of law, which is in words and figures as follows:

#### CONCLUSION OF LAW No. I.

That the plaintiff herein is entitled to have the contract, hereinbefore set forth, specifically performed by the defendants and each of them.

Defendants object to conclusion No. I herein on the grounds that it is contrary to the findings; that it is contrary to the evidence in the case and that it is contrary to law; which objections are overruled by the Court, and to such ruling of the Court an ex-



ception is hereby allowed the defendants.

#### XXIV.

That the Court erred in making its conclusion of law No. II, which is in words and figures as follows:  
[1073]

#### CONCLUSION OF LAW No. II.

That the plaintiff herein is entitled to the actual and beneficial use of an uninterrupted current of 300 real horse-power.

Defendants object to conclusion No. II herein on the grounds that it is contrary to the findings; that it is contrary to the evidence in the case and that it is contrary to law; which objections are overruled by the Court, and to such ruling of the Court an exception is hereby allowed the defendants.

#### XXV.

That the Court erred in making its conclusion of law No. III, which is in words and figures as follows:  
[1074]

#### CONCLUSION OF LAW No. III.

That the plaintiff is entitled to all reasonable surges of power necessary in starting ordinary apparatus used in connection with mining, so that an uninterrupted and normal current of 300 actual horse-power may be continuously used after the starting of such machinery.

Defendants object to conclusion No. III herein on the grounds that it is contrary to the findings; that it is contrary to the evidence in the case and that it is contrary to law; which objections are overruled by the Court, and to such ruling of the Court an exception is hereby allowed the defendants.

XXVI.

That the Court erred in making its conclusion of law No. IV, which is in words and figures as follows:  
[1075]

CONCLUSION OF LAW No. IV.

That the contract in question contemplated and referred to the use of real power and that the connections of the defendant companies with the transmission line of the plaintiff company be so established as to prevent the breaking of said circuit upon the use of said momentary starting surges, and that the circuit-breakers of the defendant companies be so installed so as to permit reasonable and momentary starting surges.

Defendants object to conclusion No. IV herein on the grounds that it is contrary to the findings; that it is contrary to law; which objections are overruled by the Court, and to such ruling of the Court an exception is hereby allowed the defendants.

XXVII.

That the Court erred in making its conclusion of law No. V, which is in words and figures as follows:  
[1076]

CONCLUSION OF LAW No. V.

That the defendant companies so arrange their connection with the power line of the plaintiff company that in addition to said starting surges the plaintiff company be enabled to draw 300 actual horse-power uninterruptedly in their operations, and that the apparatus and devices installed by the defendants for the purpose of maintaining a circuit with the plaintiff company be set and regulated

according to approved wattmeter readings so that the current will not be interrupted except when more than 300 actual horse-power, according to wattmeter readings, is being taken by the plaintiff of the defendant companies.

Defendants object to conclusion No. V herein on the grounds that it is contrary to the findings; that it is contrary to the evidence in the case and that it is contrary to law; which objections are overruled by the Court, and to such ruling of the Court an exception is hereby allowed the defendants.

### XXVIII.

The Court erred in making its conclusion No. VI, which is in words and figures as follows: [1077]

### CONCLUSION OF LAW No. VI.

That the plaintiff is entitled to have established upon the connection of the plaintiff with the defendant companies at the switch-board at the power plant of the defendant companies situated at Sheep Creek a thirty second inverse time relay circuit-breaker so as to provide for ordinary overloads necessary to starting surges.

Defendants object to conclusion No. VI herein on the grounds that it is contrary to the findings; that it is contrary to the evidence in the case and that it is contrary to law; which objections are overruled by the Court, and to such ruling of the Court an exception is hereby allowed the defendants.

### XXIX.

That the District Court for the District of Alaska, Division Number One, erred in failing and refusing to find and make as its Finding No. IV, requested

by the defendants, which said Finding No. IV as requested by the defendants is in words and figures as follows: [1078]

#### FINDING OF FACT No. IV.

The Court finds that under and pursuant to the agreements, contracts and arrangements made between the parties and elsewhere referred to in these findings, the defendant corporations had constructed and did construct at Sheep Creek in the Territory of Alaska, an electric power-plant of the capacity of approximately 6,000 horse-power, which said power plant was constructed and completed within the time agreed upon and in the manner agreed upon in full compliance with the agreements herein elsewhere referred to; that at a time after the construction of said plant and prior to the commencement of this action demand was made upon the defendant companies to furnish a current agreed to be furnished to the Oxford Company, which said demand was made by the plaintiff herein, and the plaintiff then and there also notified the defendant companies that it had succeeded to the rights of the Oxford Company in that behalf; and that the rights of said Oxford Company had been assigned to the plaintiff company; that immediately upon demand having been made in that behalf steps were taken to connect the transmission lines of the plaintiff company with the bus-bars of at the power plant of the defendant companies, and that from that time on including the time when this action was commenced the defendant companies made available for the use of the plaintiff company and permitted the plaintiff company to take

from its bus-bars at its said power plant an electric current of approximately 60 amperes with a voltage of 2,300 impressed. [1079]

That the defendants by counsel duly and regularly excepted to the refusal and failure of the Court to find the facts set up in said Finding No. IV, above referred to, which exception was then and there allowed by the Court.

### XXX.

That the District Court for the District of Alaska, Division Number One, erred in failing to make Finding No. V requested by the defendants, and to find the facts as herein stated, which said Finding No. V is in words and figures as follows:

#### FINDING OF FACT No. V.

The Court further finds that 300 horse-power can be developed from an electric current of 56.2 amperes with a voltage of 2300 impressed.

To which failure of the Court to so find the facts so stated in Finding No. V and the refusal to make said finding, the defendants by counsel duly excepted, which exception was then and there allowed by the Court. [1080]

### XXXI.

The District Court for the District of Alaska, Division Number One, erred in not making and concluding as a matter of law from the findings made as requested by the defendants, conclusion of Law No. 1, which said conclusion of Law No. 1 is in words and figures as follows:

#### CONCLUSION OF LAW No. I.

From the facts found the Court concludes that the



defendant companies, in making available for the plaintiff's use an electric current in excess of 56.2 amperes with a voltage of 2300 impressed, have complied with each and all of the terms of the contracts entered into between the parties on their part.

To the order of the Court denying to make and enter said conclusion of Law No. 1 as above set forth the defendants by counsel then and there excepted, which exception was then and there allowed by the Court. [1081]

### XXXII.

The District Court for the District of Alaska, Division Number One, further erred in not making and entering conclusion of Law Number II requested by the defendants, which said conclusion of Law No. II as requested by the defendants is in words and figures as follows:

#### CONCLUSION OF LAW No. II.

The Court further concludes from the facts found that the plaintiff's bill of complaint be dismissed and that the defendants recover their costs and disbursements in this behalf incurred.

To the refusal of the Court to make and enter said conclusion of Law No. II so requested by the defendants, the defendants by counsel then and there excepted, which exception was then and there allowed by the Court. [1082]

### XXXIII.

That the District Court for the District of Alaska, Division Number One, erred in making and entering its decree herein, which is in words and figures as follows: [1083]

*In the District Court for the District of Alaska,  
Division No. 1, at Juneau.*

No. 968—A.

ALASKA GASTINEAU MINING COMPANY, a  
Corporation,

Plaintiff,

vs.

ALASKA TREADWELL GOLD MINING COM-  
PANY, a Corporation, ALASKA UNITED  
GOLD MINING COMPANY, a Corporation,  
ALASKA MEXICAN GOLD MINING  
COMPANY, a Corporation, and ROBERT  
A. KINZIE,

Defendants.

**Decree.**

This matter having come on heretofore for hearing and the testimony of the plaintiff and the defendants having been submitted herein taken under advise-ment and the Court having made and entered its findings of fact and conclusions of law herein, the parties having at all times appeared by their respec-tive attorneys, Messrs. Shackleford & Bayless, and Z. R. Cheney for the plaintiff, and Messrs. Hellen-thal & Hellenthal for the defendants, and the Court being fully advised in the premises:

IT IS ORDERED, ADJUDGED AND DECREED:

1. That the plaintiff is entitled to have and receive of and from the defendants under and by virtue of the contract set forth in the plaintiff's complaint the uninterrupted and beneficial use of 300 real or actual

horse-power to be supplied by electric current:

2. That the plaintiff is entitled to have and receive of the defendants all reasonable starting surges used in connection with the ordinary machinery used in mining for the application of 300 horse-power or less and necessary to the starting of such machinery and to the beneficial use of an uninterrupted current of 300 horse-power;

3. That the plaintiff is entitled to the use of real and not apparent power, the same to be measured by wattmeter, and that the plaintiff is entitled to use upon the circuit connecting it with the power-house of the defendants any ordinary motors used in mining operations (whether of the induction type or otherwise) commonly and ordinarily used in mining operations consuming 300 horse-power or less.

IT IS ORDERED, ADJUDGED AND DECREED that the defendants herein so set and maintain their connections, circuit-breakers and other appliances with the plaintiff company that the actual uninterrupted and beneficial use of the before mentioned rights of the plaintiff shall not in any way be interfered with, and the defendants are enjoined from using any appliances which will deprive the plaintiff of the enjoyment of the rights above decreed to the plaintiff; and defendants are perpetually enjoined from maintaining any circuit-breaker of other appliance which will deprive the plaintiff of 300 actual horse-power, or any part thereof, to be measured by wattmeters or which will deprive [1084] plaintiff of any reasonable starting surges necessary to the enjoyment of the uninterrupted use

of the said 300 actual horse-power.

The Court further decrees that the plaintiff be allowed to install upon the switch board connecting the plaintiff's power line with the defendants' power-house a wattmeter, voltmeter and ammeter, and that the same be installed in such a way that the plaintiff may have the same under lock and key for its information and inspection to check the wattmeter, voltmeter and ammeter readings of the defendant companies at said point.

IT IS FURTHER ORDERED, ADJUDGED AND DECREED in accordance with the foregoing that the contract of October 14, 1909, be specifically performed by the defendants.

IT IS FURTHER ORDERED, ADJUDGED AND DECREED that the defendants and each of them are hereby enjoined from doing any act or thing which will interfere with the enjoyment of the rights herein decreed to the plaintiff and against the defendants.

IT IS FURTHER ORDERED, ADJUDGED AND DECREED that the defendants maintain and install upon the connection of the plaintiff's power line with the power-house of the defendants at the switch board at the power-house at Sheep Creek an inverse thirty second time relay circuit-breaker in such a manner as to provide reasonable starting surges in connection with the operation of the machinery of the plaintiff company upon said power line, which said circuit-breaker shall be set at all times so as to give an uninterrupted current of 300 real horse-power as distinguished from apparent

power, to be set and maintained in addition to the thirty second resistance in the said circuit-breaker which is decreed for the purpose of providing to the plaintiff reasonable and adequate means of obtaining starting surges without interruption in their operations, and that the plaintiff have and recover of and from the defendants its costs and disbursements herein laid out and expended.

Done in open court this 12th day of June, 1913.

PETER D. OVERFIELD,  
Judge. [1085]

XXXIV.

That the District Court for the District of Alaska, Division Number One, erred in overruling the defendants' motion for new trial herein.

J. A. HELLENTHAL,  
S. HELLENTHAL,  
HELLENTHAL & HELLENTHAL,  
Attys. for Appellants, Alaska Treadwell Gold Mining Co., Alaska United Gold Mining Co., Alaska Mexican Gold Mining Co., and Robert A. Kinzie.

[Endorsed]: Due service by copy of the within admitted this 7th day of August, 1913.

SHACKLEFORD & BAYLESS,  
Z. R. CHENEY,  
Attorneys for Plaintiff-Defendant.

Original. No. —. In the District Court for the Territory of Alaska, Division No. 1. Alaska Treadwell Gold Mining Company, a Corporation et al., Appellants, vs. Alaska Gastineau Mining Company, a corporation, Appellee. Assignment of



1170 *Alaska Treadwell Gold Mining Co. et al.*

Errors. Hellenthal & Hellenthal, Attorneys for Appellants, Office: Juneau, Alaska. Filed in the District Court, District of Alaska, First Division. Aug. 8, 1913. E. W. Pettit, Clerk. By H. Malone, Deputy. [1086]

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*In the District Court for the District of Alaska,  
Division No. One, at Juneau.*

*In the United States Circuit Court of Appeals for  
the Ninth Circuit, Holden at San Francisco.*

ALASKA TREADWELL GOLD MINING COM-  
PANY, a Corporation, ALASKA UNITED  
GOLD MINING COMPANY, a Corporation,  
ALASKA MEXICAN GOLD MINING  
COMPANY, a Corporation, and ROBERT  
A. KINZIE,

Appellants,

vs.

ALASKA GASTINEAU MINING COMPANY,  
a Corporation,

Appellee.

### **Supersedeas.**

This matter coming on to be heard on the application of the appellants herein for a supersedeas to stay the enforcement of the judgment and decree rendered herein pending an appeal to the United States Circuit Court of Appeals for the Ninth Circuit, and it appearing to the Court that a petition for appeal accompanied by an assignment of errors was duly filed herein, and the appeal duly allowed as

prayed for, and a citation was duly issued herein, and said cause duly and regularly appealed to the United States Circuit Court of Appeals for the Ninth Circuit, holden at San Francisco;

NOW, THEREFORE, IT IS ORDERED that the enforcement of the judgment and decree herein rendered be stayed pending the appeal to the United States Circuit Court of Appeals for the Ninth Circuit, provided that a certain order made herein by the Honorable Peter D. Overfield, during the pendency of the action, to wit, on the 1st day of January, 1913, relating to the furnishing of starting surges, under the conditions and in the manner referred [1087] to in said order, be continued in force during the pendency of the appeal herein, provided that the service now given to plaintiff be in no way disturbed or impaired and that the circuit-breaker be held in upon plaintiff's request without any unnecessary delay.

The amount of the supersedeas bond, including the cost bond on appeal, having by the Court been fixed at \$10,000, and the appellants having given a bond in the sum of \$10,000, with sufficient sureties to the effect that they will answer all damages and costs if they fail to make their plea good, and the sufficiency of said bond and the sureties therein having been approved by the Court this writ shall be and take effect from and after the date hereon and continue in effect until the above-entitled cause has been finally disposed of by the United States Circuit Court of Appeals for the Ninth Circuit, and that the

1172 *Alaska Treadwell Gold Mining Co. et al.*  
appellee is given an exception to the above order.

FRED. M. BROWN,  
Judge for the District for the Territory of Alaska.

Entered Court Journal No. I, page 116, 117.

[Endorsed]: Original. No. ——. In the District Court for the Territory of Alaska, Division No. 1. Alaska Treadwell Gold Mining Company, a corporation, et al., Appellants, vs. Alaska Gastineau Mining Company, a Corporation, Appellee. Supersedeas. Hellenthal & Hellenthal, Attorneys for Appellants. Office: Juneau, Alaska. Filed in the District Court, District of Alaska, First Division. Aug. 8, 1913. E. W. Pettit, Clerk. By H. Malone. [1088]

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[Bond on Appeal.]

*In the District Court for the District of Alaska,  
Division No. One, at Juneau.*

*In the United States Circuit Court of Appeals for  
the Ninth Circuit, Holden at San Francisco.*

ALASKA TREADWELL GOLD MINING COM-  
PANY, a Corporation, ALASKA UNITED  
GOLD MINING COMPANY, a Corporation,  
ALASKA MEXICAN GOLD MINING  
COMPANY, a Corporation, and ROBERT  
A. KINZIE,

Appellants,

vs.

ALASKA GASTINEAU MINING COMPANY,  
a Corporation,

Appellee.

KNOW ALL MEN BY THESE PRESENTS:

That we, the Alaska Treadwell Gold Mining Company, a corporation; Alaska United Gold Mining Company, a corporation; Alaska Mexican Gold Mining Company, a corporation; and Robert A. Kinzie, appellants herein, and George F. Miller, surety, all residents of the District of Alaska, are held firmly bound unto the above-named Alaska Gastineau Mining Company, a corporation, appellee, in the sum of \$10,000 no/100, to be paid to the said Alaska Gastineau Mining Company, a corporation, for the payment of which well and truly to be made, we bind ourselves and each of us, and each of our heirs, executors, administrators and assigns and successors jointly and severally firmly by these presents.

Sealed with our seals and dated this 8 day of August, in the year of our Lord, one thousand nine hundred and thirteen.

Whereas the above-named Alaska Treadwell Gold Mining Company, a corporation, Alaska United Gold Mining Company, a corporation, Alaska Mexican Gold Mining Company, a corporation, and Robert A. Kinzie, have prosecuted an appeal to the United States Circuit Court of Appeals for the Ninth Circuit, to reverse the judgment and decree rendered in the above-entitled suit by Peter [1089] D. Overfield, Judge of the District Court for the District of Alaska;

Now, therefore, the condition of this obligation is such that if the above-named Alaska Treadwell Gold Mining Company, a corporation, Alaska United Gold Mining Company, a corporation, Alaska Mexi-

can Gold Mining Company, a corporation, and Robert A. Kinzie, shall prosecute their said appeal to effect and answer all damages and costs, if they fail to make said appeal good then this obligation shall be void; otherwise the same shall be in full force and effect.

ALASKA TREADWELL GOLD MINING  
CO.

By ROBT. A. KINZIE,

Its Agent and Genl. Supt.

ALASKA UNITED GOLD MINING CO.,

By ROBT. A. KINZIE,

Its Agent and Genl. Supt.

ALASKA MEXICAN GOLD MINING CO.,

By ROBT. A. KINZIE,

Its Agent and Genl. Supt.

ROBT. A. KINZIE,

GEORGE F. MILLER,

Surety.

Approved:

FRED M. BROWN,

Judge.

Filed in the District Court, District of Alaska,  
First Division. Aug. 8, 1913. E. W. Pettit, Clerk.  
By H. Malone, Deputy. [1090]



*In the District Court for the District of Alaska,  
Division No. One, at Juneau.*

*In the United States Circuit Court of Appeals for  
the Ninth Circuit, Holden at San Francisco.*

ALASKA TREADWELL GOLD MINING COM-  
PANY, a Corporation, ALASKA UNITED  
GOLD MINING COMPANY, a Corporation,  
ALASKA MEXICAN GOLD MINING  
COMPANY, a Corporation and ROBERT  
A. KINZIE,

Appellants,

vs.

ALASKA GASTINEAU MINING COMPANY,  
a Corporation,

Appellee.

**Citation on Appeal [Original].**

United States of America,—ss.

To the Alaska Gastineau Mining Company, a cor-  
poration, Greeting:

You are hereby cited and admonished to be and  
appear at the United States Circuit Court of Ap-  
peals for the Ninth Circuit, to be holden at Seattle,  
in the State of Washington, within thirty (30) days  
from and after this date, pursuant to an appeal filed  
in the Clerk's office of the District Court for the Dis-  
trict of Alaska, Division Number One, at Juneau, in  
the above-entitled cause, wherein the Alaska Gasti-  
neau Mining Company, a corporation, the appellee  
herein was the plaintiff, and the Alaska Treadwell  
Gold Mining Company, a corporation, Alaska United

Gold Mining Company, a corporation, Alaska Mexican Gold Mining Company, a corporation, and Robert A. Kinzie, appellants herein, were the [1091] defendants, to show cause, if any there *by*, why the judgment and decree entered in said cause of the Alaska Gastineau Mining Company, plaintiff, vs. Alaska Treadwell Gold Mining Company, a corporation, Alaska United Gold Mining Company, a corporation, Alaska Mexican Gold Mining Company, a corporation, and Robert A. Kinzie, defendants, and referred to in the petition for an appeal filed in said cause, which said appeal was by order of the Court allowed as prayed for, should not be corrected and speedy justice should not be done to the parties in that behalf.

WITNESS the Honorable EDWARD DOUGLAS WHITE, Chief Justice of the United States, this 8th day of August, in the year of our Lord one thousand nine hundred and thirteen.

FRED M. BROWN,  
Judge for the District Court for the District of  
Alaska. [1092]

[Endorsed]: Original. No. ——. In the District Court for the Territory of Alaska, Division No. 1. Alaska Treadwell Gold Mining Company, a Corporation, et al., Appellants, vs. Alaska Gastineau Mining Company, a corporation, Appellee. Citation on Appeal.

Due service by copy of the within admitted this  
8th August, 1913,

SHACKLEFORD & BAYLESS,

Z. R. CHENEY,

Attorneys for Plaintiff-Defendant.

Filed in the District Court, District of Alaska,  
First Division. Aug. 8, 1913. E. W. Pettit, Clerk.  
By H. Malone, Deputy. [1093]

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(Copy)

*In the District Court for the Territory of Alaska,  
First Division.*

No. 968—A.

ALASKA GASTINEAU MINING COMPANY, a  
Corporation,

Plaintiff,

vs.

ALASKA TREADWELL GOLD MINING COM-  
PANY, a Corporation, et al.,

Defendants.

**Decision.**

This is a suit to compel specific performance of a contract calling for 300 horse-power, to which a demurrer has been interposed. Under the pleadings and evidence the first and subsequent acts of the parties to the contract in question with reference to what was in their minds when the term "Three hundred horse-power" was used therein appears chronologically as follows:

A meeting of the representative of the Oxford

Company and the International Trust Co., Shackelford, and the representatives of the defendant companies, by their agents and officers, Bradley and Taylor, in the fall of 1909 at Juneau, Alaska, at which time the amount of power necessary for the plaintiff or its predecessors in interest to retain under the then contemplated contract and lease to properly operate its plant on its then owned and formerly operated mining property at Sheep Creek and which might under the then known surrounding conditions be necessary for its operation in the future was discussed and the conclusion reached upon the professional judgment of the said Bradley and Taylor, who were familiar, not only with the properties and plant of the plaintiff then in question, but also more or less experts in the subject of electrical currents and [1094] power plants, and the purpose for which the electric current was to be used.

This discussion led to the statement by the defendants' representatives that 200 electric horsepower would be sufficient for the plaintiff's purpose, but a reservation was made by Mr. Shackelford, the plaintiff's agent, to further substantiate after consultation with the officers of the Oxford Company and the International Trust Co. the amount of power thought necessary to be reserved under the contract and the contemplated lease, then tentatively drawn.

Mr. Shackelford accordingly then went to Boston and consulted the officers of the corporations above mentioned in Boston, among whom was one Henry Endicott, to whom at that time Mr. Bradley ad-

dressed the following letter, in the following language:

“Treadwell, Alaska, August 10, 1909.

Henry Endicott, Esq.

101 Tremont Street, Boston, Mass.

Dear Sir:

We have been talking to Mr. L. P. Shackleford about your water right on Sheep Creek, this district and both he and ourselves have agreed upon what we consider an extremely fair proposition our concession have been drawn up in the shape of a document which Mr. Shackleford will present to you as it is now this sheep creek water power is in jeopardy and can be taken at any time by adverse interests our proposed arrangement will preserve your rights while at the same time developing them and making the most use of them. I presume you are holding this water right for the value it has had and may have in the future for working the sheep creek mines and thirty stamp mill connected therewith estimating conservatively 150 HP is all the power these mines and mills ever required for their past operations. The mill is amply large enough for the mine and surely two hundred H.P. will more than take care of future requirements if the proposition is at all acceptable to you we would begin immediate work thereby preserving your rights and returning you some monthly income the proposition provides amply time in which you could decide either to sell the property outright or take two hundred H.P. for the operation of the mines and mill, your very truly,

F. W. BRADLEY.” [1095]

After consultation by the parties in interest for



the plaintiff corporation and its predecessors in interest the following wire was sent to Bradley, then in Idaho, by Mr. Endicott:

“Boston, August 23, 1909.

F. W. Bradley,  
Wardner, Idaho.

Will lease power on terms proposed subject to consent trust company if three hundred horse-power is substituted for two hundred.

HENRY ENDICOTT.”

To which Mr. Bradley replied in the following terms ten days later:

“Henry Endicott

You may substitute three hundred for two hundred horse-power may I cable Supt. Kinzie to begin immediate protection measure.

F. W. BRADLEY.”

This resulted in a contract dated October 14, 1909, in the following words and figures:

“THIS INDENTURE AND AGREEMENT made and entered into this 14th day of October, 1909, by and between Oxford Mining Company hereinafter called the lessor and The Alaska Treadwell Gold Mining Company, the Alaska Mexican Gold Mining Company and the Alaska United Gold Mining Company, hereinafter called the lessees.

WITNESSETH, First, the lessor has this date and does by these presents lease unto the lessees all of the following described real property situated on and near Sheep Creek in the Harris Mining District, District of Alaska, to wit:

The Mexican Millsite U. S. Mineral Entry No. 25,

lot 71 B. The Belvedere Millsite U. S. Mineral Entry No. 25, lot 72 B. The Jumbo Millsite U. S. Mineral Entry No. 60, Lot No. 260. Also that certain piece or parcel of land beginning at a stake identical with post No. 2 of Jumbo Millsite, U. S. Survey No. 260 on the meander line of Gastineau Channel; thence first course along the meander line of Gastineau Channel at ordinary high water mark N.  $52^{\circ} 00'$  W. 54 feet to stake No. 2; thence second course N.  $48^{\circ} 15'$  E. 200 feet to stake No. 3; then S.  $52.00'$  E. 54 feet to the N. W. side line of Jumbo Millsite U. S. Survey No. 260, 200 feet to stake No. 1, the place of beginning, containing an area of one-quarter of an acre more or less, courses expressed from the true meridian, Mag. Var.  $29.30'$ ; and also that certain water right known as the Sheep Creek Water Right and located on Sheep Creek about three quarters of a mile from its mouth, together with the flume and pipe-line connecting the same with the beach near the mill at the mouth of the said Sheep Creek, also the sawmill, boarding house, lumber sheds, wharf landing, mill dam, flumes, penstocks, water-wheels, and all other machinery and appliances used in connection with said sawmill, situated near the mouth of said Sheep Creek, together with all machinery, tools, equipment, plants of every kind and description now upon said property for a term of ten (10) years from the date hereof at a monthly rental of One Hundred and Twenty-Five (\$125.00) Dollars per month; payable in gold coin of the United States on the first day of each month during the term of said lease, at the office of [1096] the

lessees at Treadwell, Alaska; and it is hereby agreed, that if any rent shall be due and unpaid, or if default shall be made in any of the covenants herein contained, that it shall be lawful for the lessor to re-enter said premises and remove all persons therefrom, and the lessees do hereby covenant, promise and agree to pay the lessor the said rent in the manner hereinbefore specified and not to let or underlet the whole or any part of said premises without a written consent of the lessor, nor to assign this lease or any part thereof without said written consent, and at the expiration of said term the party of the second part will quit and surrender said premises in as good state and condition as the same now are.

It is the intention of the lessees to erect, equip and maintain upon said premises a water-power plant of substantial size and efficiency for the generation of electric power, and if at any times after Two (2) years from the date hereof the lessor or its assigns shall elect to take a current of not to exceed three hundred (300) electric horse-power which shall be taken from and at the generating plant to be installed upon the leased premises hereinbefore described, the lessees undertake, covenant and agree to deliver said current to the lessor or its assigns upon the execution and delivery by the lessor or its assigns to the lessee of a deed or deeds conveying said leased property herein described to the parties of the second part. If prior to the expiration of nine years from the date hereof the lessor does not elect to convey to lessees or their assigns the property herein leased and accept in full consideration

therefor the right to the use of the three hundred (300) electric horse-power hereinbefore mentioned, the lessees may at their option prior to the expiration of the ten (10) years provided in this lease purchase the property herein leased absolutely from the lessor by paying to the lessor the sum of Twenty-Five Thousand Dollars (\$25,000.) in gold coin of the United States; and the lessor covenants and agrees upon tender of said sum of Twenty-Five Thousand Dollars (\$25,000) to execute and deliver such deeds of conveyance to the property herein leased as hereinbefore specified, excepting only as to the title to (1) the one quarter acre tract hereinbefore described and (2) the premises occupied and used by the existing wharf of the lessor, to both of which the lessor now asserts only possessory titles. The lessees may at their own cost and expense undertake to perfect the said titles and should lessee wish so to do the lessor shall lend all proper assistance in its power including the using of its name, and should the said titles be so perfected to the said premises or either of them, they shall become the property of the lessor and remain covered by this lease and subject to all the terms and conditions thereof.

The covenants herein contained shall be construed as running with the land and as a charge thereon, so that any successor or successors in interest to the lessor or lessees who may acquire any interest in and to the titles to the said land shall be bound by this conveyance in the same manner as if they had executed this agreement; and the lessees hereof may require at their option that the property herein



described be conveyed by the lessor to a responsible Trustee for the purpose of carrying out the terms of this agreement, or that deeds and conveyances covering the property herein leased be placed in escrow so as to insure delivery of the same if required under the provisions of any of the covenants of this lease.

If neither of the options herein provided for are accepted by either the lessor or the lessees then the property and rights herein described with all the improvements that are or that may be hereafter placed on the said premises shall be and become the property of the lessor. [1097]

The provisions herein as to the delivery of three hundred (300) horse-power at the generating plant to be installed on the premises herein described contemplates the delivery of an uninterrupted current, but the lessees shall not be liable for damages that may arise from operating and physical causes beyond its control.

In Witness Whereof, the parties hereto have hereunto set their hands and seals the day and year first above written."

The defendant corporations thereupon completed the power plant generating about 2,600 horse-power and on October 31, 1910, the Oxford Company, plaintiff's predecessor in interest, elected to take under the terms of the contract hereinabove set out the electric current therein mentioned and stipulated for in lieu of the monthly rentals and to convey by proper indentures the said property, likewise stipulated for, to the said defendants, which said convey-



ance was duly accepted (time for receiving the same waived) and the same was received by defendant corporation on or about April 22, 1911.

On June 1, 1912, the plaintiff corporation became the owner of the property and property rights of the Oxford Company in Southeastern Alaska, at which time it entered into the possession of all the said properties. And the assignment of the contract in question was given by the Oxford Company to the plaintiff corporation at the request and with the full knowledge and consent of the defendant corporations and which conveyance was recorded in the local recording office at Juneau on October 14, 1912. Thereafter on November 8, 1912, the plaintiff corporation requested the defendant corporations to comply with the terms of said contract, and provide the power therein expressly stipulated for, and the said defendants attempted to do so by providing a connection with the plaintiff's transmission lines and the defendants' power plant in a manner to deliver to the plaintiff corporation electrical current of sufficient volume and voltage to produce 300 electric horse-power and install at their said powerhouse an instantaneous circuit-breaker, which broke the current whenever the current exceeded the amount specified, as claimed by them in the contract. [1098]

The testimony shows that at the time the circuit-breaker was first installed it was set at about eighty (80) amperes and thereafter reduced to about sixty (60) amperes.

This suit resulted by reason of the contention of

the plaintiff corporation that it was not only not receiving, by reason of the installation of the instantaneous circuit-breaker, starting surges or peaks claimed to be necessary to the beneficial use of the 300 electric horse-power specified for in the contract, but it was not in fact receiving 300 electric horse-power.

The defendants, on the other hand, claimed that under the contract the plaintiff and its predecessor in interest were entitled to a current not to exceed 300 electric horse-power and therefore not entitled to starting surges or peaks; and second, that it was furnishing under the terms of the contract the stipulated electric current of 300 horse-power therein mentioned; that the instantaneous circuit-breaker set as theirs was at 60 amperes permitted the plaintiff corporation and its predecessor in interest to draw from the defendants' bus-bar at their Sheep Creek power plant 300 electric horse-power, as meant and expressed in the contract.

The questions necessary to the decision of this suit resolve themselves into two: Did the contract contemplate the defendants' furnishing to the plaintiff and its predecessor in interest starting surges or peaks in excess of 300 electric horse-power; that is, does the term *use* employed in the contract contemplate in connection with the surrounding circumstances of the contracting parties an intention that the defendants should furnish sufficient power to permit and entitle the plaintiff and its predecessor in interest to the beneficial use of 300 electric horse-power? [1099]

Secondly, Does the term 300 electric horse-power of and in itself contemplate in reference to the surrounding circumstances of the contracting parties at the date of the contract, as well as subsequently, real or apparent power; that is to say, did the contracting parties have in mind and take into consideration the power factor of the motors then installed or to be installed by the plaintiff and its predecessor in interest to utilize the electric current specified in the contract or did the contract contemplate unity power factor?

To the point raised by the demurrer that the questions involved by the pleadings and the evidence are not of equitable cognizance attention is first directed.

There is no question raised but that the contract is free from fraud and was entered into with all the facts open to and known by the contracting parties. The question alone is as to the remedy to be applied.

It cannot be said that in an action at law to be brought at different times during the term of this contract to recover in damages the difference in money, the value of a current claimed by the plaintiff, a denial by the defendants is adequate when the evidence shows conclusively that there is no other current available and that work had been planned by the plaintiff and was being prosecuted during all the times since this action was begun, which requires all the current called for under the contract in question, in connection with the development of a very comprehensive mining system.

It seems clear that the plaintiff's remedy, as contended for by defendants, is inadequate for the pro-

tection of its rights. Suits at law from time to time to recover damages for the refusal of the defendant corporations to furnish the full amount of current called for under the contract would not give the relief necessary to secure the plaintiff's rights, and it is highly [1100] problematical if the loss to plaintiff could be estimated in money damages with the least degree of accuracy or justice.

Franklin Telegraph Co. vs. Harrison, 145 U. S. 459.

This was an action for the specific performance of a contract, necessitating the defendants to maintain for the use of the plaintiffs an electric wire already installed upon the defendant's poles and the decree was granted.

A distinction is attempted to be made by the defendants in their brief herein between the facts of the above-cited case and the one here, the contention being that the parties there had occupied the same position for ten years, that is, the defendant had been required to maintain, and had maintained, the telegraph wire requested by the action to be maintained under injunctive relief; in other words, that the relief accorded was simply leaving the parties in *statu quo*.

The distinction, if any, seems more fanciful than real, since here the parties have no alterations to make of moment, if the plaintiff be entitled to an increased ampereage and starting surges, nor is personal service on the part of the defendants to maintain the current an objection to equitable relief demanded, since no different service is here required



than has been given by defendants heretofore in furnishing the present current.

All that is sought by the plaintiffs in this case is an alteration in the defendants' system employed to permit an increase in the amount of the current already supplied.

An analogous case is that of *Hendricks vs. Hughes et al.*, 23 So. 637, in which specific performance was prayed for the enforcement of a contract calling for the stipulated water-power necessary to operate a gin for a period of five years. Hughes had erected his gin and defendants had furnished the power. Hughes obtained it by means of a rope belt attached to the pulley shaft [1101] of defendant's sawmill. Defendant had started to erect a gin of their own in such a location as to prevent Hughes' connection with defendant's pulley. The relief demanded was held equitable in form and the injunction to restrain the erection of defendant's gin in the place contemplated by defendant was held proper.

In this case the relief demanded is the proper setting and use of electrical appliances "to prevent the destruction of contractual relations."

This action settles the rights of the parties under the contract once for all time. This is not only preventing multiplicity of suits to recover damages, endless litigation between the parties and their successors in interest, but it is also an adequate remedy which under the facts in this instance could not be compensated for in money damages.

Equity having jurisdiction to compel the necessary alterations in the defendants' system of supplying



the current under the contract, it follows the demurrer is overruled.

The contract is to be construed, if possible, in the light of the intention of the parties to the instrument as it appears, not only in the contract, but also from the evidence before the Court in so far as it shows the surrounding circumstances of the subject of the contract, the relationship of the parties as it existed at the time of the execution of the same; the object to be accomplished under the agreement; the use of the subject matter when discussed and known by both parties and the manner in which it was to be used.

First and most naturally we scan the language of the contract, and if its terms are unequivocal and no ambiguity exists, either in the words employed or in inconsistencies between different paragraphs with reference to the same subject matter, then the contract speaks for itself. [1102]

It is claimed that the failure to mention in the contract surges or peaks results that it was not contemplated at the time of the agreement, nor its use anticipated. The evidence leaves little doubt that the necessity of starting surges or peaks was not anticipated or thought of, at least at the time of the execution of the contract. It therefore follows that the first question under the issues must be decided upon the fact that neither party to the contract thought of or anticipated the necessity or use of the surge or peak, now acknowledged to be necessary to start the kinds of motors then in use at Sheep Creek, and which both parties would naturally expect would be employed to entitle and permit the plaintiff to

utilize the current contracted for.

That means the use of induction motors employed when a current of about 300 HP is being utilized for general mining purposes. Form K General Electric motors had been generally used in Alaska, and was naturally in the minds of the contracting parties at the date of the contract. At the time the contract was executed the machinery operated by the power at the Sheep Creek mines was not in operation, the Sheep Creek mines not being then worked and had not been for some time, yet it is apparent that both parties to the contract had in mind at that time the reservation of sufficient horse-power electric current on the part of the plaintiff's predecessor in interest to successfully operate the said property as a mine.

At that time there was still located on the Sheep Creek properties and formally operated there a thirty-stamp mill, two rock-crushers, two air-compressors, two hoists and about 100 electric lights.

While the situation of the plaintiff's predecessor in interest was that of one embarrassed about maintaining the title to the water-power in question, in that the law demanded the plaintiff's predecessor to continue to put to beneficial use the water at the Sheep Creek power plant, which might be at any [1103] time relocated by other interests, it was also a valuable asset to the defendants to obtain additional power there to generate electricity, to be utilized by them in their adjacent large mining operations in the vicinity where the water-power had been already largely developed and utilized.

No doubt under the testimony plaintiff's predecessor did not at the time of the contract so much in-

tend to operate the Sheep Creek mines with the electric current reserved under the contract as they hoped it would prove an asset and inducement in offering for sale their Sheep Creek property as a whole.

At any rate, there is no question but that the reservation of the 300 HP electric current was to enable the Sheep Creek properties as a mine to be successfully operated.

The parties first began the negotiations which resulted in the contract, Shackleford, Bradley and Taylor, at Juneau and Treadwell, Alaska, in August, 1909, L. P. Shackleford at that time representing the International Trust Company and afterwards the Oxford Mining Co., its successor in interest F. W. Bradley, Consulting Engineer of the defendant companies, in charge of their operations, construction and development in Alaska and H. H. Taylor, the then President of the defendant companies.

At that time these gentlemen were familiar with the machinery then situated on the Sheep Creek property, as well as the power necessary to operate the same and the purposes for which the machinery would be employed.

There is testimony that they estimated the power necessary to be reserved for the purposes of the plaintiff's successor in interest, to be not over 150 HP and they added 50 HP for good measure, estimating the amount of power to be reserved by the plaintiffs at 200 electric HP. However, Shackleford reserved the right to submit the amount of power to be reserved under the contemplated contract to his clients and with the tentative draft of

the contract and the letter from Bradley to Endicott about [1104] the same in his possession, he submitted the same to the officers of his corporations he then represented, in Boston, and the amount of 200 HP was not found by them sufficient or at least not satisfactory, and the telegram was sent to Bradley, in Idaho, that the tentative contract would be acceptable if 300 HP were inserted where the figures 200 HP then appeared.

At this point there was a meeting of the minds of the contracting parties on the subject matter now before the Court, and the only alterations made in the original draft of the contract prepared by Shackelford, Bradley and Taylor were the necessary changes of the term "200" to "300" wherever the former had been employed in the original.

To further follow the evidence, in order to ascertain the intention of the parties contracting for the electric current reserved under the contract, we revert to the following:

Bishop, formerly employed at the Sheep Creek mines, and power plant, testifies, that the power necessary to run the machinery situated on the Sheep Creek property when it was last operated prior to the contract shows that there was employed in the operation and development of the mines: 1 straight line air-compressor, 14-inch cylinder, 16 or 18 inch stroke; 1 duplex air-compressor, 16-inch cylinder, 16-inch stroke; 1 80 HP. Westinghouse 500 volt electric generator, direct current; 1 25 HP. Sprague 500 volt direct current generator and a 75 HP. Sprague generator.



At the mill was installed a 50 HP. C. & C. Motor, a 50 HP. Sprague motor, also a 25 HP. motor, which ran the rock-crushers.

These motors were employed to run a 30-stamp mill, rock-crushers, air-compressors, hoists and about 100 lights installed in and about the buildings and mine. [1105]

At the conference held by Shackelford with his clients in Boston at the time was one B. L. Thane, who was called into consultation by the plaintiff's predecessor and being familiar with the properties at Sheep Creek and the machinery situated thereon and its use, advised that 300 HP was necessary for its successful operation. Wallenberg, an electrical engineer employed by the plaintiff company, testifies that the amount of power required to run the machinery situated on the Sheep Creek properties in 1909 was as follows:

Running a mill of 30 stamps, 50 to 60 HP; 2 rock-crushers 25 HP; 100 lights 10 HP; 2 hoists 15 HP; 2 pumps 10 HP; the air-compressors 75 HP. That the power necessary to operate the equipment at the mines was as follows: For the use of the 2 air-compressors 165 HP; one generator 80 HP; 1-25 HP generator or 370 HP.

Kinzie, manager for the defendant companies in Alaska, at Juneau, testified that he was acquainted with the machinery on the Sheep Creek properties in 1909; that it could have been operated with a 200 HP current if proper machinery had been installed.

This leaves but one conclusion, and that is irresistible, that the parties to the contract knew at the



time of the execution of the contract that the machinery then on the Sheep Creek property could not be successfully run on a 200 HP electric current, without the aid of other machinery, that is, a different equipment than had been employed.

Mr. Kinzie's testimony, and he is corroborated by all the other witnesses called on the point, is that the General Electric Form K motor requires at least three or four times the starting surge it requires to operate its load, many of the witnesses testifying that it requires nine times the electric [1106] current to start such a motor that it does to operate it under its normal load.

It seems apparent that the parties to the contract had in mind when contracting for the current in 1909 the use of the usual machinery employed at Sheep Creek and similar means for the mining and development of such a property and the power necessary to operate the plant then at Sheep Creek and generally used in similar ventures.

There can be no doubt but that with the amount of power to be utilized and the purpose for which it was to be used a General Electric Form K motor was anticipated, it being the most popular and practical motor of the size to be employed in connection with the power or current and the motor requiring the least care and experience in operating it.

It is therefore to be concluded from the situation of the parties to the contract that it was their intention that the power to be reserved under the contract was for the purpose of operating the Sheep Creek properties, employing at least such power in its future

operations as had been employed in the past, and that the usual induction motors used in similar operations would also be employed here; that at least over 200 HP had been so employed and without the right under the surrounding circumstances to a starting surge the plant could not have been operated. The development in electrical starting appliances since 1909 must be taken into consideration when looking at the intention of the parties as portrayed in the contract of 1909.

Keeping in mind the machinery, kind, capacity and use to which it was to be applied, we now look to the terms of the contract for any assistance which may be afforded in reaching the intention of the parties to the contract.

The first expression employed by the parties standing alone limits the current to "a current of not to exceed three [1107] hundred (300) electric horsepower."

The next expression employed in the same instrument to express what was in the minds of the contracting parties is the "right to use the three hundred (300) electric horse-power hereinbefore mentioned." The *express* "three hundred (300) horse-power hereinbefore mentioned" is a current not to exceed 300 electric HP, so the term "use" does not in any way add necessarily to the amount of the power or limit to a current not to exceed 300 electric HP.

But the term "use" is significant if it means, as is contended for by the plaintiff, the beneficial use of 300 electric HP, limited to a current not to exceed 300 electric HP, when the facts show that, employing the

usual form of motors starting them unloaded under the usual conditions, with the ordinary aids and auxiliaries that not more than one-third of the power contracted for could be beneficially employed at the Sheep Creek mines, in the absence of a starting surge of momentary duration, being furnished by the defendants.

Aside from the intentions of the contracting parties as shown by the testimony the well-known principle is involved in the construction of grants "that whoever grants a thing is deemed to grant that without which the grant itself would be of no effect."

True, the rule applies only to such things as are incident to the grant and directly necessary to the enjoyment of the thing granted.

Assuming the beneficial use of 300 electric HP to have been the object and the intention of the parties to the contract, then no stretch of logic or of the imagination is necessary to find the starting surge a thing incident to the grant in this case and of so much importance that for all [1108] practical purposes it would render the grant of 300 HP ineffectual, in that without the starting surge the 300 HP could not at best begin to furnish the necessary power to operate the Sheep Creek properties.

True, another side to the question presents itself, why not assume, quite as consistently, not that the defendants should provide a starting surge, but that the plaintiff provide different machinery, other motors or auxiliaries in connection with their motors, which would permit them to start with little additional power to that required to carry their load.

The answer is that under the testimony the General Electric Form K motor is the motor most generally in use and must have been anticipated by the parties. Thus, the Form K motor is used for the work here contemplated to the exclusion of other forms of motors and the testimony is conclusive that the ordinary and usual auxiliaries known in 1909 are employed to aid the starting of the plaintiff's Form K motor of 200 HP now installed and which the current under the contract was being used to operate.

So it cannot be reasonably asserted that such methods were anticipated or could have been anticipated by the parties in 1909.

Again, the equities of the case—To give the plaintiff the use of a current not to exceed 300 HP the defendants have a plant of about 3000 HP capacity, from which, at infrequent periods at the most, they would be obliged to provide a momentary surge, the actual value of which is less than five cents for each surge supplied the plaintiff; taking into consideration the large amount of current generated by the defendants at the Sheep Creek power plant and the character of the current required and the length of duration of the surge, it does not impress the Court that it [1109] can work the least hardship to the defendants' lines or operations, and that alterations or additions are not necessary on the defendants' part to give this necessary and incidental grant to the plaintiff, except that instead of employing the instantaneous oil circuit-breaker as now, a time relay circuit-breaker must be installed at defendants' power-house, which will permit the plaintiff to start



their motors by the aid of momentary surges.

Turning to the second question—

What is meant by the terms, “The use of an uninterrupted current of not to exceed 300 electric horse-power”? Does it mean, under the language of the contract and the surrounding circumstances attending the parties in 1909, real or apparent electric horse-power?

In other words, assuming the current at defendants’ bus-bar at Sheep Creek to be of the following elements—a voltage maintained at 2300; an alternating current there phased—how many amperes are the plaintiffs entitled to—56 as claimed by defendants, on the assumption that unity power factor was intended under the contract, or 82 as alleged by the plaintiff, claiming the amount of amperes should be regulated at all times by the power factor existing on plaintiff’s circuit, depending upon the machinery employed by them and its load at maximum capacity.

It is claimed that unless the actual power factor is given consideration in this matter by the Court, the plaintiffs suffer injury, and the defendants are not furnishing 300 electric HP uninterrupted for the use of the plaintiffs. That if the power factor of the plaintiff’s machinery is at less than unity, then the defendants would not be furnishing, nor would the plaintiffs be permitted to use, 300 electric HP, and the amount thus not furnished by defendants and not employed by the plaintiff, would still be enjoyed by the defendants—that is to say, if the power factor of plaintiff’s motors is but 72 instead of [1110] unity and the defendants furnish a current with a current-



breaker set at 56 amperes, the defendants fail to supply the 300 HP, in that they are retaining and enjoying a current represented by the difference between 56 amperes and 80 amperes and the plaintiff deprived of its use.

Here the contention is made that the defendants are not at fault if the plaintiff cannot beneficially enjoy 300 HP, when a current of 56 amperes, impressed at a constant voltage of 2300 is furnished by them at their bus-bars at the Sheep Creek power plant. That by the plaintiff corporation installing a synchronous motor at their plant, or by using all the current for electric lights, it could and would be enabled to use and beneficially enjoy all the electric current of not to exceed 300 HP, when the circuit-breaker is maintained at 56 amperes. Of course, no account is here taken of line and transformer losses, etc., since by the terms of the contract the current is to be furnished by defendants and taken by plaintiff at the bus-bars of the defendants, at the defendants' power house at Sheep Creek.

The answer to this contention is twofold: First, That the use to which the current was to be applied was never anticipated, by the contracting parties or any of them, to be alone for electric lights, at least to but a small proportion of the amount of the 300 HP. Secondly. The parties to the contract could not have had in mind that the 300 HP current would be utilized by plaintiff by installing a synchronous motor. Under the evidence, the use of such a motor is not practicable under the circumstances of this subject matter, for the reason that such a motor is

not only an expensive machine when employed to utilize a current of not to exceed 300 HP, but it is a motor of intricate parts and probably would be more difficult in operation [1111] when installed in connection with the use to which the current under the contract was to be applied, that is, in mining operations. The synchronous motor is a machine employed generally to bring to unity the power factor of motors of much larger capacity than here required by the plaintiff to utilize their current of 300 HP and seldom, if ever, employed on a current of 300 or less horse-power.

It then follows that the parties must have had in mind a power factor of less than unity and the defendants were to do and intended to do one of two things, either furnish an electric current of not to exceed 300 HP on the assumption that the plaintiff would not use in fact 300 HP or that they would furnish 300 HP as a matter of fact, taking into consideration the power factor at all times of the plaintiff's machinery and the use to which they might put the current supplied.

It does not seem reasonable that the parties intended that the defendants supply less than the amount specified. But it is contended that to furnish in fact 300 HP would work an undue hardship on the defendants, in that the means to secure knowledge of the actual power utilized by the plaintiff would be under the control of the plaintiff, and even then, would require constant changes in the time relay circuit-breaker, in order to prevent the plaintiff getting more than the 300 HP.

The evidence is conclusive that the wattmeter is the proper instrument to measure electric currents; that with a constant voltage maintained as is done at defendants' Sheep Creek power plant at 2300 volts, with a curve reading wattmeter and an ammeter there installed, the defendants can with no difficulty confine the current to 300 HP, based upon the actual power factor on the plaintiff's line, when the plant at plaintiff's end of the line is running under its normal load at any stated time. [1112]

It follows that the means of ascertaining the exact power factor of the plaintiff's circuit can be ascertained at its power-house instantly by the employment near its bus-bar on the plaintiff's line of the usual and ordinary instruments for recording electric currents, and they may with precision fix that amount at 300 electric HP.

The evidence shows that the amperage necessary to furnish 300 electric HP, real as distinguished from apparent electric horse-power, was first anticipated by the defendants, in that its circuit-breaker when it began furnishing the current to the plaintiff was set at something over 80 amperes, and also that it had ordered and intended to use on plaintiff's line a curve reading wattmeter, an indication, however important or otherwise, showing how the defendants construed their obligations under the contract before this suit arose, at the very inception of furnishing electric current under the contract to plaintiff herein.

The testimony of the witnesses for both parties discloses the fact that the use of the automatic, instantaneous circuit-breaker on the plaintiff's line at the

bus-bar of the defendants' power-house at Sheep Creek has resulted in several undue interruptions in plaintiff's operations of its motor at its mines, where a 200 HP induction motor is employed.

Whenever the motor has been necessarily stopped since the amperes have been reduced to 56, it has been impossible for plaintiff to start the same though detached from its load and the ordinary auxiliaries attached to the motor. At such times the defendants have insisted that the manager of defendants' companies at the offices in Treadwell be notified before the person in charge at all times at the power plant at Sheep Creek be permitted to replace or throw in place again the said circuit-breaker. In many instances this delay occurring during the [1113] night has resulted in the circuit-breaker being left out for a period of from one to eight hours, at a time when plaintiff's force of men were on shift and leaving the mine and buildings in total darkness, as well as rendering necessary the cessation of work of all machinery in the mine whose motive power is the electric current in question.

It is apparent that the uninterrupted use of 300 HP is not being furnished nor enjoyed when a 200 HP motor of the type and build installed by plaintiff cannot be operated under the conditions hereinbefore set out, and it seems patent that the parties did intend the current specified in the contract should start, run and operate at least a 200 HP motor of the General Electric Form K.

The depositions of several men of reputation in the electrical engineering world appear in the testi-



mony. Necessarily, their testimony is confined to the questions propounded in the interrogatories which in some instances were not formed in a manner to assist the Court in arriving at the issues in the action.

But they all agree that the proper unit in the measurement of electrical current is the watt, and that the wattmeter is the proper instrument to record actual electric horse-power; that an ammeter in connection therewith enables the operator to so set a circuit-breaker as to deliver without any trouble or inconvenience the actual horse-power called for in the contract.

The possibility of accident to the defendants' plant at Treadwell, which is operated in part by the same circuit as the plaintiff's mines, a difference of opinion appears among these learned men, but the fact remains that the defendants' companies furnished a similar amount of current to one of its allied branch mining companies, a few miles distant from the Sheep Creek mines, during the past winter, and had installed [1114] a time relay circuit-breaker, without injury.

To the direct question propounded to the experts what power factor would be implied in a contract, silent on the subject, calling for the use of an uninterrupted current of three hundred horse-power, the majority of the answers were unity power factor.

And it may be said, were not the intentions of the parties disclosed aside from the terms of the instrument, such a conclusion would be the correct one, but since the subject of the action is to determine the very intention of the parties to the contract, when such in-



tention is patent, not only in the language employed in the contract, but by viewing the subject matter, putting one's self in the place of the contracting parties, at the inception of the contractual relations, then the additional light thus shed on the question must be given due weight.

Findings of fact and conclusions of law may be prepared, and a decree will be entered in accordance therewith.

Dated at Valdez, Alaska, this 5th day of June, 1913.

PETER D. OVERFIELD,  
District Judge. [1115]

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*In the District Court for the Territory of Alaska,  
Division No. 1, at Juneau.*

Case No. 968—A.

ALASKA GASTINEAU MINING COMPANY,  
a Corporation,

Plaintiff,

vs.

ALASKA TREADWELL GOLD MINING COM-  
PANY, a Corporation, ALASKA UNITED  
GOLD MINING COMPANY, a Corpora-  
tion, ALASKA MEXICAN GOLD MINING  
COMPANY, a Corporation, and ROBERT A.  
KINZIE,

Defendants.

**Motion for New Trial.**

Come now the defendants in the above-entitled cause and respectfully move the Court to grant a new

trial, for the reason that the evidence is insufficient to justify the decision, and that it is against the law, for the reason that the Court erred in refusing to receive evidence offered on behalf of the defendants to the fact that the plaintiff had not complied with the contract, to which exception was duly and regularly taken at the time of the trial, and for the further reason that the Court erred in refusing to permit the defendants to amend their answer relative to noncompliance of the contract by the plaintiff, to which exception was duly and regularly taken by the defendants on the trial.

Dated this 12th day of June, A. D. 1913.

HELLENTHAL & HELLENTHAL,

Attorneys for Defendants.

[Endorsed]: Original. No. 968—A. In the District Court for the Territory of Alaska, Division No. 1. Alaska Gastineau Mining Company, a Corporation, Plaintiff, vs. Alaska Treadwell Gold Mining Company, a Corporation, and Robert A. Kinzie et al., Defendants. Motion for New Trial. Hellenthal & Hellenthal, Attorneys for Defendants. Office: Juneau, Alaska. Filed June 12, 1913. E. W. Pettit, Clerk. By H. Malone, Deputy. [1116]

*In the District Court for the District of Alaska, Division No. One, at Juneau.*

THE ALASKA GASTINEAU MINING COMPANY, a Corporation,

Plaintiff,

vs.

ALASKA TREADWELL GOLD MINING COMPANY, a Corporation, ALASKA UNITED GOLD MINING COMPANY, a Corporation, ALASKA MEXICAN GOLD MINING COMPANY, a Corporation, and ROBERT A. KINZIE,

Defendants.

**Praeipie [for Transcript of Record].**

To the Clerk of the District Court for the District of Alaska, Division Number One.

You will please prepare a transcript of the record in the above-entitled cause and transmit the same to the Circuit Court of Appeals for the Ninth Circuit, to be used in the hearing of the appeal herein, said transcript to include a copy of the complaint, a copy of the demurrer filed to the complaint by the defendants, a copy of the answer of the defendants, and a copy of the reply filed by the plaintiff, a copy of the bill of exceptions, a copy of the petition of appeal and order allowing the same, a copy of the assignment of errors, a copy of the writ of supersedeas, a copy of the supersedeas and cost bond, a copy of the citation on appeal together with the acknowledgment of service thereon by the appellee, a copy of the opinion

of Judge Peter D. Overfield rendered herein, a copy of the motion for new trial together with the original citation, all of which is to be prepared with the view of transmitting the same to the United States Circuit Court of Appeals for the Ninth Circuit, in connection with the appeal herein, within the time limited by the rules [1117] of that court.

HELLENTHAL & HELLENTHAL,

J. A. HELLENTHAL,

S. HELLENTHAL,

Attorneys for Alaska Treadwell Gold Mining Co.,  
Alaska United Gold Mining Co., Alaska Mexican  
Gold Mining Co. and Robert A. Kinzie.

[Endorsed]: Original. No. 968—A. In the District Court for the Territory of Alaska, Division No. 1. Alaska Gastineau Mining Company, a Corporation, Plaintiff, vs. Alaska Treadwell Gold Mining Co., a Corporation et als., Defendants. Praecipe. Hellenenthal & Hellenenthal, Attorneys for Defendants. Office: Juneau, Alaska. Filed in the District Court, District of Alaska, First Division. Aug. 9, 1913. E. W. Pettit, Clerk. By —————, Deputy. [1118]

*In the District Court for the District of Alaska,  
Division No. 1, at Juneau.*

No. 968—A.

ALASKA GASTINEAU MINING COMPANY,  
a Corporation,

Plaintiff and Appellee,

vs.

ALASKA TREADWELL GOLD MINING COM-  
PANY, a Corporation, ALASKA UNITED  
GOLD MINING COMPANY, a Corpora-  
tion, ALASKA MEXICAN GOLD MINING  
COMPANY, a Corporation, and ROBERT A.  
KINZIE,

Defendants and Appellants.

**Certificate [of Clerk U. S. District Court, etc.].**

I, E. W. Pettit, Clerk of the District Court for the District of Alaska, Division Number One, do hereby certify that the foregoing and hereto attached eleven hundred eighteen pages of typewritten and other matter, numbered from one to eleven hundred eighteen, both numbers inclusive, constitutes a full, true and correct copy of the record, and the whole thereof, prepared in accordance with the praecipe of the appellants, filed herein and made a part hereof, in cause No. 968—A, entitled Alaska Gastineau Mining Company, a Corporation, Plaintiff and Appellee, vs. Alaska Treadwell Gold Mining Company, a Corporation, Alaska United Gold Mining Company, a Corporation, Alaska Mexican Gold Mining Company, a



Corporation and Robert A. Kinzie, Defendants and Appellants;

I do further certify that the said record is by virtue of the order allowing appeal and the citation issued herein and made a part hereof, and the return in accordance therewith;

I do further certify that the said record has been prepared by me in my office, and the costs of preparation, examination, and certificate, amounting to six hundred thirty-nine and 35/100 (\$639.35) dollars, will be paid to me by Messrs. Hellenthal and Hellenthal, attorneys for the defendants and appellants.

IN WITNESS WHEREOF I have hereunto set my hand and affixed the seal of the above-entitled court this 21st day of August, 1913.

[Seal]

E. W. PETTIT,

Clerk of the District Court for the District of Alaska,  
Division Number One. [1119]

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[Endorsed]: No. 2311. United States Circuit Court of Appeals for the Ninth Circuit. Alaska Treadwell Gold Mining Company, a Corporation, Alaska United Gold Mining Company, a Corporation, Alaska Mexican Gold Mining Company, a Corporation, and Robert A. Kinzie, Appellants, vs. Alaska Gastineau Mining Company, a Corporation, Appel-

lee. Transcript of Record. Upon Appeal from the United States District Court for the District of Alaska, Division No. 1.

Received and filed August 28, 1913.

F. D. MONCKTON,  
Clerk of the United States Circuit Court of Appeals  
for the Ninth Circuit.

By Meredith Sawyer,  
Deputy Clerk.

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*In the District Court for the District of Alaska,  
Division No. 1, at Juneau.*

*In the United States Circuit Court of Appeals for  
the Ninth Circuit Holden at San Francisco.*

ALASKA TREADWELL GOLD MINING COM-  
PANY, a Corporation, ALASKA UNITED  
GOLD MINING COMPANY, a Corpora-  
tion, ALASKA MEXICAN GOLD MINING  
COMPANY, a Corporation, and ROBERT A.  
KINZIE,

Appellants,

vs.

ALASKA GASTINEAU MINING COMPANY,  
a Corporation,

Appellee.

**Order [of District Court Directing That Appeal be  
Heard at September, 1913, Session at Seattle,  
Washington].**

This matter having come on upon the application  
of the defendants and appellants above named for

an order staying the execution of the final decree herein pending appeal, plaintiffs appearing by their attorneys, Messrs. Hellenthal & Hellenthal, and the defendant appearing by its attorneys, Messrs. Shackleford & Bayless and Z. R. Cheney, and objecting to supersedeas herein, which objection was by this Court overruled, and it appearing to the Court, however, that the plaintiff and appellee is entitled to a speedy determination of this cause, in view of the request of the appellants that the final decree be stayed;

IT IS NOW THEREFORE ORDERED that the appeal in this case be heard before the United States Circuit Court of Appeals at its September, 1913, session at Seattle, Washington, instead of at San Francisco, California, and that the record in this case be made up with necessary speed to accomplish that purpose.

Done in open court this 8th day of August, 1913.

FRED M. BROWN,

Judge.

[Endorsed]: No. 2311. United States Circuit Court of Appeals for the Ninth Circuit. Order that Appeal be Heard During September, 1913, Term at Seattle, Washington. Filed Aug. 18, 1913. F. D. Monckton, Clerk.